

## STIC Search Report Biotech-Chem Library

## STIC Database Tracking Number: 121196

TO: Manjunath N Rao

Location: rem/3b11/3c70

**Art Unit: 1652** 

Friday, May 14, 2004

Case Serial Number: 10/016725

From: Paul Schulwitz

**Location: Biotech-Chem Library** 

**REM-1A65** 

Phone: (571)272-2527

paul.schulwitz@uspto.gov

## Search Notes

Examiner Rao,

See attached results.

If you have any questions about this search feel free to contact me at any time.

Thank you for using STIC search services!

Paul Schulwitz Technical Information Specialist STIC Biotech/Chem Library (571)272-2527



## STIC-Biotech/ChemLib

12/196

From:

Rao, Manjunath N.

Sent:

Wednesday, May 05, 2004 10:22 AM

To:

STIC-Biotech/ChemLib

Subject:

Sequence search request for 10/016,725

From:

Manjunath N. Rao

Art Unit 1652, Room 16811 Mail Box in Room 16811

Phone: 306-5681

Date: 5-5-04

Please search the following as soon as possible for application with serial number 10/016725

- 1. Nucleotides 1-3958 of SEQ ID NO: 15
- 2. Nucleotides 1-3910 of SEQ ID NO:15

against all **commercial nucleic acid databases** including **issued patents database** and **pending application database** and provide **a print of all results**.

If you have any questions please call me at the above phone number.

Thanks

Manjunath N. Rao Art Unit 1652, Room 3B81, Mail Box in Room 3C70, Remsen Building, USPTO 400, Dulany St. Alexandria, VA. Phone: 571-272-0939

Searcher:\_\_\_\_\_\_Phone:\_\_\_\_\_\_
Location:\_\_\_\_\_
Date Picked Up:\_\_\_\_\_
Date Completed:\_\_\_\_\_\_
Searcher Prep/Review:\_\_\_\_\_
Clerical:\_\_\_\_\_
Online time:\_\_\_\_\_

TYPE OF SEARCH:

NA Sequences:

AA Sequences:

Structures:

Bibliographic:

Litigation:

Full text:

Patent Family:

Other:

VENDOR/COST (where applic.)
STN:
DIALOG:
Questel/Orbit:
DRLink:
Lexis/Nexis:
Sequence Sys.:
WWW/Internet:
Other (specify):

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May 12, 2004, 16:32:19 ; Search time 23820.8 Seconds (without alignments) 7114.428 Million cell updates/sec
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Copyright (c) 1993 - 2004 Compugen Ltd.
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em\_htgo\_other:\*

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score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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U-U H-H 19-19 F		Qy         3481 GCTCCCGACGCGGGCAGAGGCCCAGCGGCGGGGGAGGCTGAAAAGG 3540           Db         3481 GCTCCCGACGCGGCATGCCGGCCCAGCGCGCGGGAAGCTGAAAAGG 3540           Db         3541 AGAAACAGGAGGGAGCGAGGGCCCAGCGGCGGGGGAGCAGAATGCCCCGA 3600           Db         3541 AGAAACAGAGGAGGGAGCGAGGGCGCGGGGGGAACAGCAG		2781   TOTATCTCCCCCTCCGGCGATCGGCGGGACCGCGCGGCGAGCAACTCC 3840	RESULT 2 AF320307 LOCUS DEFINITION Homo sapiens stearcyl-CoA desaturase (SCD) gene, exon 1 and intron 1 and partial cds. ACCESSION VERSION AF320307.1 GI:14150490 KEYWORDS SOURCE SOURCE Homo sapiens (human) ORGANISM Homo sapiens (human) ORGANISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhin; Hominidae; Homo. AUTHORS Zhang,L., Ge,L., Tran,T., Stenn,K. and Prouty,S.M. TITLE ISOlation and characterization of the human stearcyl-COA desaturase
1981   ATACAAAAATTAGCTAAGTGTGGTGGCAFGCTGAATCCCAGCTACTTGGGAGGGT   2040	2221 TGTGCCACATGCCAAGTACTTCTGAGGCATGACTGGATGAGCTGTCCACATCTGAAATCA 2280 2221 TGTGCCACATGCCAAGTACTTCTGAGGCATGACTGGAGGCGTGCCACATCTGAAATCA 2280 2221 TGTGCCACATGCCAAGTACTTCTGAGGCATGACTGGAGGCAGGC	AGTCTACCTCCCAGGAAATCCCAGGTGTTGTTTCCTGGGAAGTGAATCATTGGCGCAG	2521 TGGGCATGGAAGGACACCGGGTGAATGCATAGCCTGCTTCTGAGCTCTCATGGTAA 2580 2581 GGCTCCTACACACACGGAAAAGATGGGGCCACAGGACAGATCACTAGGTCACACACA	2701 GTTTCTGGGCTCAACTGCTCGTCACTTACTGGTTGCTGTGACCATGGGCAAGTTA 2760 2701 GTTTCTGGGCTCAACTGCCGCTCCGTCACTTACTGGTTGCTGTGACCATGGGCAAGTTA 2760 2701 GTTTCTGGGCTCAACTGCCTCAGCTTTTAAAATGGAATAATGGGGTAACCCTCC 2820 2761 TTCCATCTCCTATCTCTTTCTCAACTTTTAAAATGGAATAATGGGGTAACCACCTCC 2820 2761 TTCCATCTCTCCATATCTTTCTCACTTTTAAAATGGAATAATGGGGTAACCACCTCC 2820 2821 CAGGGTCACAGAGAGGCTTACAGAAAAACGATTCTTGTGAATTGGCGTAATAAATTC 2880 2821 CAGGGTCACAGAGAGGGCTTACAGAAAAACGATTCTTGTGAATTGGCTTACAGTAATAATTC 2880 2821 CAGGGTCACAGAGAGAGGCTTACAGAAAAACGATTCTTGTGAATTGGCTTTGCAGTAATAATTC 2880	2881 AATACCTGCCAGCTATTCTTATTCCACATCCAGCCCTTTCGCCTGCTGGGTGAAA 2940 2881 AATACCTGCCGCCGTATTCTTATTCCACATCCAGCCCTTTCGCCTGCTGCTGGGTGAAA 2940 2881 AATACCTGCCGCGGTTTCCTGACGTTTCCACAGCCCTTTCGCCTGCTGCTGGGTGAAA 2940 2941 CACATGTCAGTTTCCTGACGGTTTCCAAAGAAGTTCCAAATTACAACTGCCAG 3000 2941 CACATGTCAGTTTTCCTGACGGTTTCCAAAGAAGAATTACAAACTTGCAGG 3000 3001 TCTGAAGAATCTCCAAAACATCCCGCACGCACCCGCGCGCG

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			0 1 0 1 0 1	
Gene promoter: requirement of a conserved CCAAT cis-element MEDLINE 21308466 PUBMED 1141548 PUBMED 1141548  REFERENCE 2 (bases 1 to 4150) AUTHORS Zhang, L., Ge, L., Tran, T., Stenn, K. and Prouty, S.M. TITLE Direct Submission JOURNAL Submitted (09-NOV-2000) Skin Biology TRC, Johnson and Johnson, CPWW, 199 Grandview Road, Skilman, NJ 08558, USA Location/Qualifiers Source / A150 / A150 / A2150 / A	/tissue_type="scalp skin keratinocytes; liver; hair follicles; brain"  gene	TATA_signal /95432.D  TATA_signal /95432.D  MENA /39.D  /950="SCD" /950duct="stearoyl-CoA desaturase" /700te="3602" exon /39584129 /100tb="SCD" /100tb="SCD" /100tb="SCD" /100tb="SCD" /100tber=1.500	CDS	Query Match         100.0%;         Score 3910;         DB 9;         Length 4150;           Best Local Similarity         100.0%;         Pred. No. 0;         0;         Indels         0;         Gaps         0;           QY         1         AGGAATTCATCATTTAAATCATACAATTTAATGGCTTTTAGTAATTCACAGGTTGGC         60         0         0;         AGGAATTCATCATTTAAATCATACAAATTTAATTACTCCAAAATTTAATTCACAGGTTGGC         60           QY         61         ATCCATCACACATCCATTTAAAACATTTAATTACTCCAAAAATAAACCCTGCATTCCTT         120         0         61         ATCCATCACCACATCCATTTAATTAATACTCCAAAAATAAACCCTGCATTCCTT         120         0

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1441 TITITITITITITITGAGAAAGAGICTIGCICTITCACCCIGGCIGGAGGCAGTGGTG 1500	1501 TGATCTCAGCTCACTGCAACTTTCGCCTCCGGGTTCAAGCAATTCTCCTGCTT 1560 1561 CCCAAGTAGCTGCAACTACAGGCACTTCCCACCACGCCGCCGCGCTTTTTTTT	TAGAGATGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACTTTTTGCTGTCATAATTG [	1681 TTGTAACTATTGTTCCTTTTGCTGAGGTGCCCCCAGACCAAAAAAATAAAT	1741 AATCCAAATCAGTGTTGGTTTGACCACTGTCACTTGAGAACCACAGTGTGACCAGGGC 1800 	1801 CTCAGGAGTAGAGGTGATCTCTGCTCGAAAGAGAAATAGAAAAGAAAATATTCTCCGGGCC 1860 	1861 AGGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCAAGGCATGTGGATCAC 1920 	1921 CTGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAA 1980 	1981 ATACAAAAATTAGCTAAGTGTGGGGGGTGCCTGTAATCCCCAGCTACTTGGGAGGGG 2040 	2041 GAGGCAGGAGAATTTCTTGAACCCGGGAGGCAGGGTTGCAGTGAAGCGAGATCACACA 2100 	2101 CTGCACTCCAGCCTGGGGAGAGCGAGACTTCCTCTCAAAAAAACAAAAAGA 2160 	2161 ATTAAGCAAATTAGACATTGCAGAGAGACCCTGAAGGGGGTCAGACCACGTACAGATTTC 2220 	2221 TGTGCCACATGCCAAGTACTTCTGAGGCATGACTGGATGAGCTGTCCACATCTGAAATCA 2280 	2281 TCCAGTCTTGTTCAGAACTTTCACACCGGACAGGGGGCTGGAATGCAGTCTCCT 2340	2341 GGTCACTGGCCAGAGAGTTGGCCTTGACCCTGAGACCAGTGGCCAACAAAGGAGCTGCTT 2400 			

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NOTE: This is a 'working draft' sequence. It currently consists of 12 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
  Sequencing vector: M13; M77815; 100% of reads Chemistry: Dye-terminator Bisg Dye; 100% of reads Assembly program: Phrap; version 0.960731 Consensus quality: 151339 bases at least Q40 consensus quality: 15517 bases at least Q20 Consensus quality: 15517 bases at least Q20 Insert size: 167000; agarose-fp Insert size: 167000; agarose-fp Quality coverage: 4.9 in Q20 bases; sum-of-contigs Quality coverage: 5.2 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                   2297: contig of 2297 bp in length
2197: gap of 100 bp
5719: contig of 3322 bp in length
5819: gap of 100 bp
10149: contig of 4330 bp in length
10249: gap of 100 bp
16496: contig of 6247 bp in length
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pieces.
3601 GCCAATGGCAACGGCAGGACGAGGTGGCACCAAATTCCCTTCGGCCAATGACGAGCCGGA 3660
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                                                                                                                                                                                                                                      3781 TCTGTCTCCCCCCCCCCCCTACCCTCCACGCGGGGACCGCCCCGCGCCAGTCAACTCC 3840
                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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All repeats were identified using RepeatMasker:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center: Whitehead Institute/ MIT Center for Genome Research
                                                             3661 GTTTACAGAAGCCTCATTAGCATTTCCCCAGAGGCAGGGCAGGGGCAGGGCAGGGCGGGTGG
                                                                                                                          TGTGGTGTCGGCAGCATCCCCGGCGCCCTGCTGCGGGTCGCCGCGAGCCTCGGCC
                                                                                                                                                               3721 rendendrosenercescascarcecescecerecresereseses
                                                                                                                                                                                                           3841 TCGCACTITGCCCCTGCTTGGCAGCGGATAAAAGGGGGGCTGAGGAAATACCGGACACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Web site: http://www-seg.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
------ Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Birren, B., Linton, L., Nusbaum, C. and Lander, E. Homo sapiens, clone RP11-2M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center clone name: 2 M 13
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HTG; HTGS PHASE1; HTGS DRAFT.
Homo sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
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AUTHORS
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ch 159351;	.s 2; Gaps 2; CACAGGTTGTGCAT 62	CCTGCATTCCTTAG 122	CCACCAATCTACTT 182                 CCACCAATCTACTT 59211	AGCAAACAACT 242              		CTGTGTGGGTATCC 362	GAGTGCAGTGGCAC 422	ACTACCTCAGCCTC 482	TTTTTTTTTATTT 542	AGATAGGGTCTCAC 602 	CCTTGACTTCCTGG 662	AAACACGTGTCACC 722               AACACGTGTCACC 58671	GCCCAGGCTGGAGT 782	AGCAATCCGCTGGC 842	CAGCTAAGTTTTAA 902	GWATTTTTATTGTT 962 
937 smbly_fragment" 9351 smbly_fragment" Score 3880.2; DB 2; Pred. No. 0;	<u> 5</u> —5	CATCACAATCCATTTTAGAACAGTTTTATTACTCCAAAAATAAACCCTGCATTCCTTAG 	CCATCACCCCCCAACATCCTCCATCCTTCCAAGCCCTGGGCAACCACCACTACTACTT 	CTGTCTCTATAAATTTGCCAATTCTGGACATTTCATATAAATGGAAGCAAACAACATGT 	GAGACTTIGIGACTGGCTGCTGTCTACTTTTTAAGGCTCATTATGCA 	GIACITAGCAGIACITCAITCITITIAITCICAAAIGGIAITCCACIGIGIGGGIAICC 	CATATCATATTATTAGAGACAGGTTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGCAC	AATCATAGCTCACTGTAACCTCAAACTCCTGGGGTCAAGTGATCCTACTACTACCTCAGCCTC	CAGAGTAGCTAGGACTACAGGCACACACACACCATACCTGGCTAATTTTTTTT	TCATITIAIGIAITCAITITCITITCITITTGITGITGITGITIGAGATAGGGICTCAC	TITETTACCCAGGCTGGAGGGCAGTGGCATGGTGACAGCTGAGCAGCCTTGACTTCCTGG	GCTCAAGTGATCCTCCTGCCTCCAGCCTCCCAAGTAGCTGGGACTACAAACACGTGTCACC	atgcctggctgatattttttttttttgaaacagggtatcactctgttgcccaggctggagt 	acagiggegtaataatagctcactgcagcctccctcctggggctcaagcaatccgctggc 	CTCAGCATCCTGAGTAGCTGGGACTACAGGCTTGTGCCACCAGGCCCAGCTAAGTTTTAA	AAAATGATTITIGGTATAGAGGAGGTCTIGCTAIGTIGCTCAGGCIGTATITITATIGIT 
misc_feature 9159212: /note="assign misc_feature 1220381 IGIN Query Match 99.2% Best_Local Similarity 99.9%	Ches 3904; CC 3 GAATT 59390 GAATT	63 CCATC       59330 CCATC	123 CCATC        59270 CCATC	183 TCTGT       59210 TCTGT	243 GAGAC       59150 GAGAC	303 GTACT       59090 GTACT	363 CATAT       59030 CATAT	423 AATCA       58970 AATCA	483 CAGAG       58910 CAGAG	543 TCATT       58850 TCATT	603 TTTGT       58790 TTTGT	663 GCTCA       58730 GCTCA	723 ATGCC       58670 ATGCC	783 ACAGT       58610 ACAGT	843 CTCAG       58550 CTCAG	903 AAAAT       58490 AAAAT
ORIGI	Mat Qy Db	Oy Dp	oy Q	QY Db	Qy Db	oy da	Qy Dp	Уб С	Qy Ub	Qy Db	oy da	yy Db	cy ab	Qy Dp	cy ag	Oy Db

λõ	y 963 GAGACAAGGTCTCACTATGTTGCCATGATCCCCCCACCTCCAC	TTCCCAAAGTGCTCATC
ΩD	58430 GAGACAAGGICICACIAIGITGCCAIGAICCCCC	Treceasagreereste 58
Š	1023 TTATCTGTTCATTAGTCAGTTGACAGACATTTAGGTTGT	CCACTITITGACCATIAIG 108
ΩD	58370 TTATCTGTTCATTAGTCAGTTGACAGACATTTAGGTTGT	
δλ	1083 AATAATACTCCAGTGAATATT	GCATATGTTTCATTTCTGT 1142
Д	58310	TICIGI 582
δy	1143 TGGGTTTATATCTAGGAGTGG	ATATTTTGACAGGCAGAGTT 1202
gg	5	TIGACAGGCAGAGII 581
δy	1203 CAGGGGAAGAAAACTTGGGAAAAT	ATCAGCAAGAGTGCAGGGGT 1262
DÞ	58	CAGGGGT 581
ζŏ	1263 ITTTCGGAGTFTTATTTATATTCT	ACAAGTT 132
qu	58130 TITICGGAGIIIIAITITATATATICI	SATGAAGATACAAGTT 580
Ωy	1323 ATACTAAGTGAGAAGTGAGAATTAAG	AGAGTAAAATCATGAAG 13
qa	58070 ATA	CATGAAG 580
δλ	1383 CAC	CACAAT
рр	58010 CACTTTGAATACCAAAATTAAGGAGCTTG	CACAATT
ð	1443 TITITITITITITIGGAAAGAGTCTTGC	rggrgrg 1
QQ	57950	α
ò	1503	6
Ωp	57890	ATTCTCCTGCTTCAGCCTCC 57831
Qy	1563	Ò
Db	57830	7
Qy	1623	m
οp	57770	TTTTGCTGTCATAATTGTT 57711
ογ	1683	AAAAAAATAAATCTTAGAA 1742
Dp	57710 GIAACIATIGHTCCTTTTGCTGAGGTAGG	AAAAAAATAAATCTTAGAA 57651
ò	1743	CCACAGTGTGACCAGGGCCT 1802
Dp	57650 TCCAAATCAGTGGTTGGTTTGACCACTG	ACCAGGGCCT
λ̈́O	1803 CAGGAGTAGAGGTGATCTCTGCTCGAAAG	TCCGGGCCA
Dβ	57590	I
Qy	1863 GCGTGGTGGCTCATGCCTGTAATCCCAGC	FGGATCACCT 192
qq	57530 GCGTGG	AAGGCATGTGGATCACCT 5
λö	1923 GAGGTCAGGAGTTCAAAACCAGC	CGTCTCTACTAAAAT 198
qq	57470 GAGGTCAGGAGT	
à	198	CTTGGGAGGGTGA 20
op Op	57410 ACAAAAATTAGCTAAGTGTGGTGGCG	crredeadedrea 573

comment to the property of the control of the contr	CATATCAPATTATTAGAGACAGGTTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGCAC  CATATCATAT	3 GCTCAAGTGATCTCTGCCTCAAGTGAGTGAGACTACAAACAGGTGTCACC 722 2 GCTCAAGTGATCCTCTGCCTCAGCCTCCCAAGTAGCAACACACGTGTCACC 653 2 GCTCAAGTGATCTCTTGTCTCAGCCTCCCAAGTAGCTGGGACTACAAACACGTGTCACC 653 3 ATGCCTGGCTGATATTTTTTTTTTTTTTTTTTTTTTTTT	1023 TIATCHGTTCATTAGTCAGTGACATTAGGTTGTTTCACCATTATG 1082 65612 TAACTGTTCATTAGTCAGTGACACATTAGGTTGTTCACCATTATGACCATTATG 1083 65612 TAACTGTTCATTAGTCAGACATTAGACTGTTTCACTTTTTGACCATTATG 56671 1083 AATAATACTCCAGTGAATATTCATGTACATTTTGTGGGGCATATGTTTTCATTTTTGTT 1142 65672 AATAATACTCCAGTGAATATTCATGTACATTTTGTGGGGCATATGTTTTCATTTTTTTT
TT EES ource Local hes 35 6465 6477 6483 6483 6483 6483 6483	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8	6 4 6 8 6 8 6 8 6 8 6 8 6
	ced gi:14586033.  rom overlapping clones.  and as variations  ne name. Note that the  e sequence submission  we submit sequences with  s otherwise noted: all  enced with an alternate  ie., phraed quality >=  uencing problems, such  re covered by at least  t. The following  accession numbers given  bases: Em:, EWBL; Sw:,  mation on the WORMPEP		CCCC CATT TT AGENT

1939 XMTTATCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	G7111 GGCATGGAAGGACCCGGGTGAATGCTTAGCCTGCTTCTGAGCTCTCATGGTAAGG 67170 2583 CTCCTACAGGAAAAGATGAGGGCACAGGACAGATCAGGTCCTCATGGTAAGG 67170	2763 CCATCTCCCATATCTCTTTCCTCACTTTTAAAATGGAATAATGGGGTACCCCCCCACACTCCCACACTCCCACACTCCCACACTCCCACACTCCCACACTCCCACACTCCCCACACACACACACACACACACACACACACACACACAC	2883 67471 2943	67531 3003 67591	3063 CCCGCCCGGGTCCTGAACAGGATGCGTGCGCGGGGGGCACACACA	9 9		3302 GGGGACGGGAAGACGGGACGGAGATGTTAGTGGTGGGCGCCCCCGAGGGTTCACCACTG 3361 	3362 TITCCTGAGAAACTICCCCAGTGCCCACCCGTCTCTCGTGTGCCCGAGGCCGGTC 3421 	0 0		3542 GARACAGAGGGGGGGGGGGGGGGGGGGGGGGGGAAACAGCAGATTGCGCCGAG 3601 	3602 CCAATGGCAACGGCAGGACGAGGTGGCACAAATTCCCTTCGGCCAATGACGAGCGGGAG 3661 
112 CANADAMITA CONCENSOR AND CONTROLLED AND CONTROL	6 6 6 6 6		à a à	an ka	oy B	a ya	Qy GD	& g	ko aa	Qy Dp	λ <sub></sub> d	oy B	දු දු
112 CANADAMITA CONCENSOR AND CONTROLLED AND CONTROL	991 2 2 111 2	2 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4	2 2 1	d d	_ <del>H</del>	н ,		н					
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1968 GTCTCTARABARACAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCAGC 2027
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                                                                                                                                                        1: contig of 2338 bp in length
1: gap of 100 bp
4: gap of 100 bp
7: contig of 243 bp in length
7: contig of 4083 bp in length
7: gap of 100 bp
7: contig of 2490 bp in length
7: gap of 100 bp
8: contig of 42128 bp in length
8: gap of 100 bp
9: contig of 2069 bp in length
1: contig of 2069 bp in length
1: contig of 2069 bp in length
1: gap of 100 bp
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g of 10951 bp in length
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g of 2167 bp in length
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of 47508 bp in length
gap of 100 bp
contig of 2268 bp in length
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of 2338 bp in length
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Matches 1823; Conservative
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                                                                                                                                                                                                                                          3781
 AL391723 185644 bp DNA linear HTG 11-SEP-2001
Homo sapiens chromosome 10 clone RP11-38B21, WORKING DRAFT
SEQUENCE, 14 unordered pieces.
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                           3722 GIGGIGIGIGACAGCAICCCCCGGCGCCCTGCTGCGGCTCGCCGAGCCTCGGCCT
                                                                                            68310 GTGGTCGGTGTCGGCAGCATCCCCGGCGCCCTGCTGCGGCGTCGCCGAGCCTCGGCCT
                                                                                                                                            CTGTCTCCTCCCCCTCCCCCTTACCTCCACGCGGGACCGGCCCGCGCCAGTCAACTCCT
                                                                                                                                                                                                                CGCACTITGCCCCTGCTTGGCAGCGGATAAAAGGGGGCTTGAGGAAAATACCGGACACGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
Submitted (10-SEP-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk
On Sep 19, 2000 this sequence version replaced gi:10178830.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Assembly program: XGAP4; version 4.5
Assembly program: XGAP4; version 4.5
Sequencing vector: plasmid; L08752; 100% of reads
Consensus quality: 17502 bases at least Q40
Consensus quality: 17502 bases at least Q30
Consensus quality: 187156 bases at least Q20
Insert size: 184344; sum-of-contigs
Insert size: 140788; 6.0% error; agarose-fp
Quality coverage: 4.15x in Q20 bases; sum-of-contigs Quality
coverage: 6.51x in Q20 bases; agarose-fp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          59110: contig of 59110 bp in length 59210: gap of 100 bp 61285: contig of 2075 bp in length 61385: gap of 1100 bp 64379: contig of 2994 bp in length
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AL391723.7 GI:10186824
HTG; HTGS_PHASB1; HTGS_DRAFT.
Homo sapiens (human)
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DNA linear HTG 08-FEB-2003
WORKING DRAFT SEQUENCE.
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161827 bp DNA linear HTG 08-FEB-200 Papio hamadryas clone RP41-194B17, WORKING DRAFT SEQUENCE.
AC139668.
AC139668.1 GI:28273351.
HTG; HTGS PHASE1, HTGS_DRAFT.
Papio hamadryas (hamadryas baboon)
Papio hamadryas (hamadryas baboon)
Papio hamadryas (hamadryas Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Cercopithecidae;
                    TCCCGCACGCATCCTGGAGGCGCGGGCTTGGGATGGGACTGCCCGGCCCGGGTCCTGAAC
                                                                                AGATCCTGGGGTGCCTCCCCCTGCCCTGGGGGGGAC-GGAAGACGGGA
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Pred. No. 0;
0; Mismatches
Patent: WO 0240666-A 21 23-MAY-2002;
XENON GENETICS INC (CA)
    Location/Qualifiers

    1970
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

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Best Local Similarity 99.7
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results can be
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Avid (http://baboon.math.berkeley.edu/mavid),
Lagan (http://lagan.stanford.edu/) and paired end information.
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Cercopithecinae; Papio.
1 (bases I to 161827)
Cheng, J. Hamilton, M., Peng, Y., Mukherjee, S., Hosseini, R., Peng, Z., Malinov, I. and Rubin, E.M.
Direct Submission.
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                                                                                                                  Unpublished
2 (bases 1 to 161827)
Cheng,J.-F., Hamilton,M., Peng,Y., Mukherjee,S., Hosseini,R. Peng,Z., Malinov,I. and Rubin,B.M.
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Chemistry: Dye-terminator Big Dye
Assembly program: Phrap veration 0.990329.

* NOTE: This is a "working draft' sequence. It currently
* consists of 1 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  http://pga.lbl.gov/cgi-bin/search_cvcgd?type=n&value=SCD
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Location/Qualifiers
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Pred. No. 0;
0; Mismatches 134; Indels
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Jista (http://www-gsd.lbl.gov/VISTA). The
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/mol_type="genomic DNA"
/db_xref="taxon:9557"
/clone="RP41-194B17"
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                                                                                                                                                                                                                                                                                                                         Sequence Produced by Berkeley PGA
Web site: http://pga.lbl.gov
Center Code: PGABERK
Center Project Name: B051
Bac Clone Name: RP41-194B17
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Zhang, Z., Zhu, B., Yu, J. and Yang, H.  TITLE Chromosome 3p genomic sequence JOURNAL Unpublished Lobase 1 to 179879) AUTHORS Li, W. Hu, S., Dong, W., Wang, J., Zhang, Y., Zhang, H., Liu, B., Bao, W., Sun, Y., Wu, Q., Wang, H., Yang, X., Cheng, C., Wang, Y., Niu, Y., Qi, X., Li, T., Zhang, H., Liu, N., Wu, D., Yu, B., Fan, H., Liu, Y., Li, G., Li, C., Bao, Q., Wang, L., Zhang, L., Liu, Y., Li, G., Huang, F., Zhang, G., Li, J., Bian, X., Zhang, M., Li, L., Feng, X., Yu, J.		COMMENT On May 29, 2000 this sequence version replaced gi:7417472.	Center project Information Center project name: 1% project Center clone name: RP11-799119	Consensus quality: 14936 bases at least Q40 Consensus quality: 160276 bases at least Q40 Consensus quality: 167926 bases at least Q20 Consensus quality: 167926 bases at least Q20 Insert size: 148122; sum-of-contigs Quality coverage: 3.56x in Q20 bases;sum-of-contigs	NOTE: This is a 'working draft' sequence. It current consists of 41 contigs. The true order of the pieces is not known and their order in this sequence recordabitrary. Gas between the contigs are represented runs of N, but the exact sizes of the gaps are unknown record will be updated with the finished sequent	* as soon as it is available and the accession number will  * be preserved.  * 1497 1596: gap of unknown length  * 1597 2949: contig of 1359 bp in length  * 2550 3049: gap of unknown length  * 3050 4409: gap of unknown length  * 4410 4509: gap of unknown length  * 4510 6137: contig of 159 hp in length	gap of unknown contrig of 1047 gap of unknown contrig of 1629 gap of unknown contrig of 1331 gap of unknown contrig of 1233 gap of unknown contrig of 2133 gap of unknown contrig of 1932 gap of unknown contrig of 1932 gap of unknown contrig of 1356 gap of unknown contrig of 1356 gap of unknown contrig of 1612 gap of unknown contrig of 1612 gap of unknown contrig of 1612 gap of unknown contrig of 2368 gap of unknown contrig of 2878 gap of unknown contrig of 2878 gap of unknown sapp of unknown
Db 140606 GGCAGAGCCATTGTTCCCAGGCTGACTGAGCCCCAGGGCTGGCCGGGAGGGGGGGG	3357 CACTGTTTCCTGAGAAACTTCCCCAGTGCCCACCCGTTCTCCGTGTGCCCGAGGCC	OY 3417 CGGTCCTGGGCTCCGGGCCCCAACCGGGTCCCCTTCCAGAGA 3476  Db 140846 CGGTCCTGGGCTCCGGGCCCCAGCCCCACCCCAGTCCTTCCAGAGA 140905  OY 3477 GAAAGCTCCGACGCGGGATGCCGGGCTCCCAGTGCCTTCCAGAGA 140905  OY 140906 GAAAGCTCCTAACGCGGGGTGCCGGCCCAGCGGCGGGTGGAAGAAGAAGAAGAGAAGTGAG 3536  Db 140906 GAAAGCTCCTAACGCGGGGTGCCGGCCCAGCGGCGGGCGG	QY         3537 AAGGAGAAAACAGAGGAGGGAGCGAGCAGCAGAGGAAACAGCAAATTGCG         3596	AGGCCGG         aggcccg	DD	QY         3837         CTCCTCGCACTTTGCCCCTTGGCAGGGGTAAAAGGGGGTGAGGAAATACCGGACA         3896           Db         141265         CTCCGCGGCACTTTGCCCCTGCTTGGCAGCAGAAAAAGGGAAAATACCGAACA         141324           Qy         3897         CGGTCACCGTTGC         3910           Db         141325         CGGTCACCCGTTGC         141338	RESULT 8 AC026883 AC026883 AC026883 ACCESSION ACCESSION AC026883 ACCESSION AC026883 ACCESSION AC026883 AC02683 AC026883

misc_feature 9	misc_feature 1	misc_feature 1		misc_feature 1	misc_feature 2	misc_feature 2	misc_feature 2,	misc_feature 27	misc_feature 3(	/r misc_feature 33	misc_feature 37	misc_feature 41	misc_feature 43	misc_feature 46	misc_feature 49	a/		Matches 1456	OY 3 GAATTCATC	Db 109955 GAATTCATC	Qy 63 CCATCACAA		QY 123 CCATCACCC		QY 183 TCTGTCTCT			Ì	Db 110195 GAGACTTTG	Qy 303 GTACTTAGCZ	Db 110255 GTACTTAGCA	Qy 363 CATATCATAT	Db 110315 CATATCATAT	QY 423 AATCATAGCT	   Db 110375 AATCATAGCT	Qy 483 CAGAGTAGCT
contig of 2434 gap of unknown contig of 3369	36912: contig 37012: gap of	41169: concig or 4057 41169: gap of unknown 43658: contig of 2489	43758: gap of unknown 46574: contig of 2816	46674: gap of unknown	49990: gap of unknown	gap of unknown	57478: Gap of	61598: contig of 4120 61698: gap of unknown	65686: 65786:	70673: contig of 4887 70773: gap of unknown	76442: contig 76542: gap of	80193: contig of 3651 80293: gap of unknowr	83730: contig of 3337 83730: gap of unknown	89196: contig of 5466 89296: gap of unknown	contig of 4195 gap of unknown	99952: contig of 6361 100052: gap of unknown	107237: contig 107337: gap of	* 107338 113752: contig of 6415 bp in length * 113753 113852: gap of unknown length	119355: contig of	119455: gap of 127315: contig	137358:	gap of unknown contig of 1085	148411: gap of unknown leng 160062: contiq of 11651 bp	* 160063 160162; gap of * 160163 179879; contig	cation/Qualifiers	/organism="Homo sapiens"	/ warref = genomic DNA: //warref = genomic DNA: //barref = genomic DNA:	/ map="3" /map="3p"	/clone="RP11-799119"	ט ע	misc feature 2000 1000 1000 1000 1000 1000 1000 100			Misc_feature 62387284		<pre>misc_feature 7385. 79013 /note="assembly_name:Contig13"</pre>

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROACTGGCTTTCACTTAGCATTCTATTTTAAGGCTCATTATGTTACA 302
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGIACTICATICITITIATICICAAATGGIATICCACTGTGGGGTATCC 362
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37.0%; Score 1448.2; DB 2; Length 179879;

Y 99.1%; Pred. No. 0;

:rvative 0; Mismatches 13; Indels 0; G
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120071 AGCCAAATGGACTAAGACAAAGAGTAAACCCTGCAGTTGGTAAAGCAACAGATCTTCCAA 120130
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2184 AGAGAACCTGAAGGGGGTCAGACCACGTACAGATTTCTGTGCCACATGCCAAGTACTTCT 2243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAGAATTAAGCAAATTAGACATTGCAG 2183
                                              LB4, please see website
d.lb1.gov/cheng/BAC.html
ugh the BACPAC Resources Center:
yres.htm as LBNL-1 to LBNL-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2; Length 190784;
-179;
s 383; Indels 106; Gaps
                                                                                                                                                                                                                                             Sequence. It currently sequence. It currently order of the pieces in this sequence record is nigs are represented as of the gaps are unknown. In the finished sequence the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 190784;
c Applications (NHLBI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              784 bp in length.
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121240 3340 121300 3400 121355 3460	Oy   3520 GTGGAAGAAGTGAGAAGAGAAACAGAGGGGAGGGGGGGGG	QY         3700 GCAGGGCAGAGGCCGGGGGGGGGGGGGCCCCGGCCCCGGCCCCGGCCCCGGCGC		AY241932  AY241932  LOCUS  LOCUS  DEFINITION  AY241932  LOCUS  DEFINITION  AY241932  ACCESSION  AY241932  VERSION  AY241932  VERSION  AY241932  VERSION  AY241932.1 GI:29469126  SOURCE  ACCESSION  AY241932.1 GI:29469126  CONTANTO  OUTDINE  AY241932.1 GI:29469126  AY241932.1 GI:29469126  AY241932.1 GI:29469126  AY241932.1 GI:29469126  AY241932.1 GI:29469126	<u> </u>	AUTHORS Medrano, J.F., Islas-Trejo, A.D. and Johnson, A.M.  TITLE Direct Submission JOURNAL Submitted (21-FEB-2033) Animal Science, University of California, One Shields Avenue, Davis, CA 95616-8521, USA Location Qualifiers Source /organism="Bos taurus" /mol type="genomic DNA" /db_zref="taxon:9913" /chcomosome="16" jone   1.17088
2244 120191 2304 120251 2364 120311 2423	QY         2483 CCAGGGGAAGGATCCTAAGGCAGTATTTGGGAAAGAATGGGCATGGAAGGACACCGGGT 2542           Db         120430 CCAGAGAAAGGATCCTGGGCAGTATTTGGGGAGCAGGGAAGGAAGAGACTGGGT 120486           QY         2543 GAATGCATGCTGGTTCTGAGCTCCTAAGAGCTCCTAAGAGACACGGAAAAG         2602           Db         120487 GAATACAGAGGCTGGTTCTGGTCTTACGTGAGGCTCCTAAGAGCCCAGAAAAT         120546           QY         2603 ATGGGGGCACAGGCTGGTTCTGGTTACGGTGAGGCTCCAAGGCCCAGAAAAT         120546           QY         2603 ATGGGGGCACAGGACTCAGGGTCAGAGCTCCAAGGCCCAGAGGCCAGAAAAT         120546           Db         120547 ATAGGGGCACAGAGCACAGGTCAGGGCTCAAGGCATCTCAGGGCAATATGG         2662           Db         120547 ATAGGGGCAAAAGAGAGACAGGTCAAGGCATCTCAGGGACTCAAGGCC         120591	20   2663 TCCTGAGCATTAAGAGCTTGGGCTCTCATATGGTGTTTCTGGGCTCAACTGCCAGC 2722		12 12	3105 3105 12106 3159	3160 121121 3220 121181 3280

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CDS	join(20252051,25682850,67206850,83148519, 100991031,1301913218)		,
	/gc.number="1.14.99.5" /note="delta-9 desaturase"	P	# E
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	WVLFYYLMGALGITAGAHRLWSHRTYKARLPLRVFLIIGNTWAFQNDVFRSKDHRAH HKESETDADPHNSRRGFFFSHVGWLLVRKHPAVKRKGSTLNLSDLRAEKLVWFQRRYY KPGVLLLCFILPTLVFWYLWDETFQNSLFFATLFRYALGINVTWLVNSAAHMYGYRPY DKTINPRRIIJVSLGAGEGFHNYHHTFPYDYSASEYRWHINFTTFFIDCWAAIGLAY DRKKVSKAAILARIKRTGEESYKSCH	V	<pre>variation 16524 /gene="SCD" /note="compared to sequence in variant B" /replace="t" N</pre>
variation	6926 /gene="SCD" /note="compared to sequence in variant B"	Query Ma Best Loc	tch al Similarity 64.6%; Pred. No. 3.8e-111;
variation		Matc	nes 1208; Conservative 0; Mismatches 485; Indels 177; Gaps 24; 2164 AAGCAAAATTAGAGAGGAAGAACTGAAGGGGGTCAGACCACGAGGTTTCTGT 2223
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	/note="compared to sequence in variant B" /replace="g" sc45	qa	
	/gene="SCD" /note="compared to sequence in variant B" /replace="g"	QY	2224 GCCACATGCCAAGTACTTCTGAGGCATGACTGGATGGACTGTCCACATCTGAAATC 2279
variation	10153 /gene="SCD" /note="Compared to sequence in variant B" /replace="g"	Qy	23
variation	10213 /gene="SCD" /note="compared to sequence in variant B" /replace="c"	<u>کې</u>	2340 IGGICACAGAGAGITGGCCTTGACCCTGAGACCAGTGGCCAACAAGAGGGCTGCT 2399
variation	10329 /gene="SCD" /note="compared to sequence in variant B" /replace="t"	Qy	2400 TAGTCTACCTCCCAGGAAATCCCAGGTGCTTGTCTTCCTGGGAAGTGAATCATTGGCGCA 2459
variation	13565 /gene="SCD" /note="maintoring to sequence in variant B" /replace="f"	که <u>د</u>	2460 GCACTCCGTATTTTCTCCTCTTCCCAGGGAAGGATCCTAGGGAGTATTTGGGAAAGAC 2519 296 AAACTCTCACTCACTTCTCTCTCTCTCTCTCTCTCTCTC
variation	13638 /gene="SCD" /note="compared to sequence in variant B"	7 × 1	ATGGCATGGAAGGACCCGGGTGAATGCATAGCCTGCCTGGTTCTGAGCTCTCAT
variation	Intrace   C	g &	2576 GGTAAGGCTCCTACAGACCCGGAAAAGATGGGGGGCCACGGCTGCCTGGTTCCCAAGATTGCCCATAGATGGGGGCACAGATCAGTAGGGTCAGA 2635
variation	ri L	qq	404 GGTAAGGCTCCCACACCCCCGGAAAGGCCAAGACTGTGAGCCACAACAGTGAGGTCAGA 463
ייסיושנייצע	<pre>/gene="SCD" /note="compared to sequence in variant B" /replace="t" 14578</pre>	Qy	2636 GCATCTCAGGGACCGAGGCAATATGGTCCTGAGCAGGGATTAAGAGCTTGGGCTCTCAT 2695
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Variation	J*802 /gene="SCD" /note="compared to sequence in variant B" /roolace="t."	γς τ	2755 AAGTTATTCCATCTCTCCATATCTCTTTCCTCACTTTTAAAATGGAATAATGGGGTA 2811
variation	/represerve / represerve / gene="SCD"	g &	2 CCCACCTCCCAGGGTCACAGAGAGGTTACAGAAAACGATTCTTGTGAATTGGCTTGC

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                                                                                                                                                                                                                   TCATAGCTCACTGTAACCTCAAACTCCTGGGCTCAAGTGATCCTACTACTCAGCCTCCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    714 CGTGTCACCATGC --- CTGGCTGATATTTTTTTTTTTGAAACAGGGTATCACTGTTGC
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                                                                               Score 460; DB 9; Length 164201;
Pred. No. 3.3e-101;
0; Mismatches 660; Indels 111; Gaps
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153662. .153692
/note="Single clone region. Assembly confirmed by restriction digest data."
                                                                                                                                                                                                                                                                                     GAGTAGCTAGGACTACAGGCACACAGACCATACCTGGCTAAT
                                                                                                                                                                                                                                                                                                                                                   545 ATTTTATGTATTCATTTCT-
                                                                                 Query Match 11.8%;
Best Local Similarity 58.9%;
Matches 1107; Conservative (
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	311 AAGATACAAGTTATACTAAGTGAGAATTAAGGCTGGAATAGGGCGTT
Dp QD	5965 TTTTTTAGGCTCGTCAAGTGAAGCAATGAGAGTGGAGAAGGAACAAAGCAAAG
07	1371 AAAATCATGAAGCACTTTGAATACCAAAATTAAGGAGCTTGGCTGTAAACAAAATAA 1430
QC qc	6023 CTAGTIGIGAICAATTACTIGIAACACACAATIGITITITITICATITITAGTGIGCCAITTAG 6082
Qy 1	1431 AAAAICACAAITITITITITITITITITIGAGAAAGAGICIIGCICITITCACCCIGGGGGGG 1490
q <sub>C</sub>	6083 TITITICIATITATTATTATTTTTGAGATGGAGTCTTGCTCTGT-TGCCAGGTGGAA 6141
27	.491 GGCAGTGGTGTCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCT 1550
Db da	142
Oy 1	551
Db da	202 GCCTTAGCCTCCCAAGTAGCTGGGACTACAGGTGCATGCCACCATGCCCAGCTAATTTT
Qy 1	611
Db da	6262 GIAITTITAGIAAAGAIGGGGTTICGCCAIGTIGGCCAGGAIGGGCTCAAACTCCTGACC 6321
0y 1	.664ITITGCIGICATAATIGTAACTATIGTICCTTTTGCTGAGGTAGGGCCCCCAG 1719
Db 6	6322 TCAGGTGATCCACCGCCTTGGCCTCCCAAAGTGCTAGGATTATAGGCGTGAGCCACTGC 6381
Qy 1	1720 ACCAAAAAAAAATCTTAGAATCCAAATCAGTGTGTGGTTTGACCA 1768
9 40	6382 ACCGGCCGCTCTCACATTTTCCACACATTTTTGTGTAGCACATCCTTCCCTAGCACT 6441
Qy 1	769 CIGTCACTTGAGAACCACAGTGTGACCAGGGCCTCAGGAGTAGAGGTGATCTCTGCTCGA 1828
op qu	442 ITITCTAACCTTATTCCCAAGAAAAAGAACACAGGAATCTACAAGCCAGTGTCTATT 6501
Qy 1	829 AAGAGAATAGAATGAAAATATTCT1853
9 qa	502 GAAAGAATGACCTCAAAGACTTTTCTGAACTAGTGGCATGTGAACAGGTGAGTGCTGAGAC 6561
Qy 1	854CCGGGCCAGGCGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCA 1905
Db 6	562 TAAGACAGGTAGCGAGCGTGGCTTACGCCTGTAATCCCAGCACTTTGGGAGGCTG 6621
Qy 1	906 AGGCATGTGGATCACCTGAGGTCAGGAGTTCAAAACCAGGCTGGCCAACATGGTGAAACC 1965
Dp qu	622 Addigadccgaichccigaggilggagaitcagaccaaccigaccaacgiggagagaaacc 6681
	9
Db 6	682 CCGTCTCTACTAAAATACTAAATTAGCCAGGTGTGGTGGCGCATGCCTGTAATCCCA 6739
6. 21 Dp 6.	026 GCTACTTGGGAGGGTGAGGAGAATTTCTTGAA-CCCGGGAGGCAGAGGTTGCAGTG 2084
Qy 21	CCTCTCA
Db 40	800 AGCCAAGAICGGGCAITGAGCICIAGCCIGGGCAAGAAGAAGAAAACICCGCCICAAAA 6859
Oy 21	144 AAACAAAAAGAA 2161
Db 68	360 AAAAAAAAAAAAAA 6877
RESULT 12 AX357255 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE	AX357255 617 bp DNA linear PAT 13-FEB-2002 Sequence 1 from Patent WO0162954. AX357255 AX357255.1 GI:18674409 Homo sapiens (human)

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REFERENCE
AUTHORS
TITLE
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                                                                      Brownlie, A.J., Hayden, M.R., Attie, A.D., Ntambi, J.M.,
Gray-Keller, M.P. and Miyazaki, M.
Methods and compositions using stearoyl-coa desaturase to identify
triglyceride reducing therapeutic agents
Patent: WO 0162954-A 1 30-AUG-2001,
Xenon Genetics Inc. (CA); WISCONSIN ALUMNI RESEARCH FOUNDATION
(US); University of British Columbia (CA)
Location/Qualifiers
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                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Bureleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
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1 (bases 1 to 200288)

Muzny, D.M., Adame, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C., Alsbrooks, S.L., Amaratunge, H.C., Are, J.R., Ayele, M., Banks, T., Barbaria, J., Banton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bowie, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Burch, P., Burkett, C., Burrell, K.L., Byrd, N.C.,
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200288 bp DNA linear HTG 27
Homo sapiens chromosome 3 clone RP11-759D18, WORKING DRAFT
SEQUENCE, 36 unordered pieces.
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/mol_type="unassigned DNA"
/db_xref="taxon:9606"
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Chargo, T. Chan, Carter, M., Cavasos, S.R., Chacko, J., Chavez, D., Charles, C., Chen, Carter, M., Cavasos, S.R., Chacko, J., Chavez, D., Carco, C., Charles, C., Day, Carcolli, M. L., Darger, H., Dayan, C.C., Dayan, C.L., Ding, Y., Dayan, C.C., Dayan, C.C., Elbajo, C., Bactalo, C., Escotto, D., Carcolli, M. Dayan, C.C., Elbajo, C., Bocher, D., Erantz, P., Santhart, C., Berrago, C., Elbajo, C., Escotto, D., Escotto, C., Elbajo, C., Escotto, C., Es
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is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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                                                                                                                                                                                                                                                                                                               DB 2; Length 200288;
                                                                                                                                                                                                                                                                                                                                                           111;
10 159469: gap of unknown length

173326: contig of 13857 bp in length

17 173426: gap of unknown length

17 200288: contig of 26862 bp in length.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                        Score 447.2; DB 2;
Pred. No. 4.6e-98;
); Mismatches 668;
                                                                                                                    1. .200288
/organism="Homo sapiens"
/or_Lype="genomic DNA"
/db_xref="taxon:9606"
/chromosome="3"
/clone="RP11-759D18"
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  159370
159470
173327
173427
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                                                                                                                                                                  AAGCGAGATCACACCACTGCACTCCAGCCTGGG-GGAGAGAGAGCGAGACTTCCTCTCAAAA
                                                                                                                                                                                                                          GCTACTCTTTTGCTGAGGCAGGAGAATCGCTTGAACCCCATGAGGCTTAGGTTGTGGTG
                                                                                                                                                                                                                                                                  GCTACTTGGGAGGGTGAGGCAGAGAATTTCTTGAA-CCCGGGAGGCAGAGGTTGCAGTG
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                                                                                                                        TCGCGCCATTGAGCTCTAGCCTGGGCAGCAAGAGTGAAACTCCGCCTCAAAA
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AUTHORS
TITLE
                                                                                                          Matches 1071;
                                                                                                                                        Query Match
Best Local
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VERSION
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                                                                                                                                                                                                                                                                                                                                                                                                  gource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such one plasmid subclone or more than one Mi3 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em. EMBL; Sw: SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information on the WORMPEP http://www.sanger.org/
                                                                365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www.sanger.ac.uk/Projects/C elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome 10, constructed by the Sanger Centre Chromosome 10 Mapping Group. Further information can be found at
                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of Pieter de Jong. For further details see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RP11-565H13 is from the library RPCI-11.2 constructed by the group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center: Wellcome Trust Sanger
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TTTTTTTTTTGAGACAGATTCTTGCTCTGTCACCCAGGCTGGACTCCGGCAGAGGCA
                                             TATCATATTATTAGAGACAGGTTCTCACTCTGTCACCCAGGCTGGAGT---GCAGTGGCA 421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 175842)
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AL731547 AC073586
AL731547.9 GI:23380932
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                                                                                                                                                                                                                                                             clone="RP11-565H13"
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58.3%;
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Pred. No. 1.3e-94;
0; Mismatches 670;
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om clone RP11-565H13 on chromosome
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422 CAATCATAGCTCACTGTAACCTCAAACTCCTGGGCTCAAGTGATCCTACTACCTCAGCCT 481

CICGGA CICCGGA ICTCCC ICTCCC ICTCCC ICTCCC ICTCCCAAA ICTCCAAA ICCCAAC	AUTHORS Abbott, A. and Le, T.  TITLE The sequence of Homo sapiens BAC clone RP11-469M7  JUNDALIA Dished  REFERENCE 3 (bases 1 to 190508)  AUTHORS Waterston, R.H.  TITLE Direct Submission  JOURNAL Submitted (12-JUN-1998) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Parkway, St. Louis,
	DD 147660 AFGGGGTACATGTATTGCTACATGCATAGAGTGAGAGGTGAACAACTCCATCAC 147719  QY 1419 ACAAAATAATAAAAAATCACATTTTTTTTTTTTTTTGGAAAAGAGTCTTGCTCTTTCA 1478  DD 147720 CCATTACCTTGAGTATTTATTTTTTTTTTTTTTTGAGATGGAGTCTTGCTCTTGT 14779  QY 1479 CCCTGGGTGGAGGGCAGTGGTGATCTCACTCACTCACTCGCTCCGGGTTCA 1538

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/rpt_family="Alu"

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9450. .9750
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5545 5585
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/rpt_family="Alu"
12823. .12862
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                                                                    Submitted (14-MAY-1999) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. Louis, 6 (bases 1 to 190508)
                                                                                                                                                                Direct Submission
Submitted (30-SEP-2000) Department of Genetics, Washington
University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA
On May 14, 1999 this sequence version replaced gi:3309089.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE INFORMATION:
The RPCI-11 human BAC library was made from the blood of one male donor, as described by Osoegawa, K., Woon, P.Y., Zhao, B., Frengen, E. Tateno, M., Catanese, J.J. and de Jong, P.J. (1998) An improved approach for construction of bacterial artificial chromosome libraries. Genomics 5:1.8. The clone may be obtained either from and coworkers at the Roswell Park Cancer Institute lieter de Jong (http://bacpac.med.buffalo.edu)
VECTOR: pBACE3.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mapping information for this clone was provided by Dr. John D. McPherson, Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://genome.wustl.edu/gsc
                                                                                                                                                                                                                                                                                                                                                                                                           NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as Compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The clone sequenced to the left is RPI1-1378; the clone sequenced to the right is RPI1-91M5. Actual start of this clone is at base position 1 of RPI1-469M7; actual end is at 190508 of RPI1-469M7.
                                                                                                                                                                                                                                                            Center: Washington University Genome Sequencing Center
Center code: WUGSC
                                                                                                                                                                                                                                                                                            Web site: http://genome.wustl.edu/gsc
Contact: sapiens@watson.wustl.edu
------ Summary Statistics
Center project name: H_NH0469M07
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MO 63108, USA
4 (bases 1 to 190508)
Waterston, R.H.
Direct Submission
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66236 TGTTGCCCAGGCTGGTACTGAA-----CTACTGGCCTCAAGCGATCCTCCTGTCTTGG 66184
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                                                                                                                                                                                                                                                                                                                                                                                                                                        10.8%; Score 423.8; DB 9;
60.1%; Pred. No. 2.4e-92;
tive 0; Mismatches 547;
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19950. 20247
                                                                                                                                                                            /rpt family="Alu"
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17272...1719
17212...17504
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17869...18139
/rpt family="Alu"
17869...18139
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19454. .19767
             rpt_family="Alu"
5162. .15196
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/rpt_family="Alu"
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Best Local Similarity 60.1:
Matches 969; Conservative
repeat_region
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92 Dp oy oy oy

GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.	TICLET TICLET SEATCH OF THE SE	on: May 12, 2004, 16:32:18; Search time 2095.64 Seconds (without alignments) 7926.209 Million cell updates/sec	le: US-10-016-725-15_COPY_1_3910 fect score: 3910 uence: l aggaattcatccatttaaatcggacacggtcacccgttgc 3910	Scoring table: IDENTITY NUC Gapop 10.0 , Gapext 1.0	streng: 3373863 segs, 2124099041 residues	Total number of hits satisfying chosen parameters: 6747726	Minimum DB seq length: 0 Maximum DB seq length: 200000000	Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries	hase : N_Geneseq_29Jan04:*  1: geneseqn1980s:* 2: geneseqn2000s:* 3: geneseqn2000s:* 5: geneseqn2001as:* 6: geneseqn2001bs:* 7: geneseqn2003s:* 8: geneseqn2003s:* 10: geneseqn2003cs:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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ABK94411 ABK83459 ACF62736 ADB20851 ADB96923 ADB96923 ADB96214 ADC87616 AAL36879 ABX59867 AAL36879 ABX59867 AAL36879 AAC8881	ALIGNMENTS				gene 5'	nzyme; nosupp; cardi		ers	ન -ત	.108) "HNF-3/Fkh-	SREBP"	"NF-Y" .258)	"NF-Y" .266)	IRF-2".464)	SREBP" .544)	IRF-1" .672)
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The invention describes an isolated polypeptide segment (I) whose genes are fat regulated. (I) or the polymucleotide encoding it (II) are useful for diagnosing the presence of or a predisposition for a disorder involving fatty acid regulated genes in a subject. A composition containing (I) or (II) is useful for treating a disorder involving fatty acid (PUFA) disorder, escrema, cardiovascular of sorders (such as hypertriglyceridemia, dyslipidaemia, atherosclerosis polyunsaturated fatty acid (PUFA) disorder, escrema, cardiovascular disorders (such as hypertriglyceridemia, dyslipidaemia, atherosclerosis of disorders (such as hypertriglyceridemia, dyslipidaemia, atherosclerosis, coronary artery disease, cerebrovascular disease or peripheral vascular disease), inflammation (such as sinustis, asthma, parcreatisis, coronary arteritis, rheumatoid arthritis or acne), body weight disorders (such as obesity, cachexia or anorexia), psychiatric disorders, cancer, cystic fibrosis, pre-menstrual syndrome, diabetes, and diabetic complications. (I) or (II) is useful as research agent and materials for disease, (II) is useful for constructing nucleotide probes and primers, for detecting genetic polymorphism, for detecting changes in the level of corpusors region from a gene encoding a fatty acid regulated protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel isolated polypeptide segment encoded by fat regulated genes, useful for diagnosing the presence of or a predisposition for a disorder involving fatty acid regulated genes in a subject.
                     cerebrovascular disease; peripheral vascular disease; inflammation; sinusitis; asthma; pancreatitis; osteoarthritis; rheumatoid arthritis; acne; body weight disorder; obesity; osteoaxia, anorexia, psychiatric disorder; cancer; cystic fibrosis; pre-menstrual syndrome; diabetes; diabetic complication; genetic polymorphism; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Allen SJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1970 BP; 428 A; 590 C; 588 G; 364 T; 0 U; 0 Other;
    dyslipidaemia; atherosclerosis; coronary artery disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Haardt M,
Nwaka SO;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Knickle LC,
Jenkins DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 23; Fig 26, 225pp; English.
                                                                                                                                                                                                                                                                                               19-NOV-2001; 2001WO-CA001632.
                                                                                                                                                                                                                                                                                                                                            17-NOV-2000; 2000US-0248589P.
                                                                                                                                                                                                                                                                                                                                                                                    (XENO-) XENON GENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                 Goldberg YP,
De Antueno RJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-508327/54.
                                                                                                                                                                                                      WO200240666-A2.
                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                     23-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                   Winther MD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ponton A,
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'n 2180 CAGAGAGAACCTGAAGGGGGTCAGACCACGTACAGATTTCTGTGCCACATGCCAAGTACT 2240 TCTGAGGCATGACTGGATGAGCTGTCCACATCTGAAATCATCCAGTCTTGTTCAGAACTT 2300 TCACACCGGACAGGGCCAGGACTGGAATGCAGTCTCCTGGTCACTGGCCAGAGGTTG 2360 2361 GCCTTGACCCTGAGACCAGTGGCCAACAAAGGAGCTGCTTAGTCTACCTCCCAGGAAATC 2420 120 rcheaddcardachdadchdrecacarchdaarcarchachdrichdaaach 9 61 cadadadaaccidaadddgagcicadaaccacgiacaarricigigccacaigccaagiacr Gaps 44.8%; Score 1751.8; DB 6; Length 1970; 99.7%; Pred. No. 0; ive 0; Mismatches 2; Indels 3; 3; Matches 1786; Conservative Similarity 2181 2241 2301 121 181 Local g à ð g à QQ

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	2421 CCAGGIGCITGICITCCIGGGAAGIGAATCAITGGGGCAGCACTCCGIAITTTCTCCTCT 2480	2481 TCCCAGGGGAAGGATCCTAGGGCAGTATTTGGGAAAGACATGGGCATGGAAGGACACCGG 2540 	2541 GTGAATGCATAGCCTGCTTCTGAGCTCTCATGGTAAGGCTCCTACAGACAG	rcggggalacaggalagataggtagggtagggattagggalctggggalcgagggalatat 	2661 GGTCCTGAGCGGGATTAAGAGCTTGGGCTCTCATATGGTGTTTTCTGGGCTCAACTGCCA 2720	2721 GCTCCGTCACTTACTGGTTGCTGACCATGGGCAAGTTATTCCATCTCTCCATATCTC 2780	2781 TICCICACITITAAAATGGAATAATGGGGTACCCACCTCCCAGGGTCACAGAGAGGCTIA 2840 	2841 CAGAAAACGATICTIGIGAATIGGCITGCAGTAATAATICAATACCTGCCAGCTATICTI 2900 	2901 ATTCCACATCCAAGCCTTTCGCCTGCTGCTGGGTGAAACACACATGTCAGTGTTTCCTGA 2960 	2961 CGGITTCCACAAAGATTCCAAAATTACAACCTGCCAGTCTGAAGAATCTCCAAAAC3020 	3021 TCCGGAAGGAATCCTGGAAGGCGCGGGATTGGGAATGGGACTGCCCGCCGGGTCCTGAAC 3080 	3081 AGGATGCGTGGCGCAACACACACACACACCAGCCAGCCTGTGTGCGGCCGGAGTCCGG 3140 	3141 TGCGGTCCCGGGTGAGCAGCGCGTGGCTGGGCGGGCAGAGCCATTGTTCGCAGCG 3200 	3201 TACCGAGCCCCCGGCCTCGCCCGGGAGGCGGGCTTCCCGGGT-CCCCAAGCTCC 3259	3260 AGATCCTGGGGTGGCTGCCACGTCTCCCTGCCACGCGCTGGGGGAGAAGACGGGA 3319 	3320 CGGAGAIGTIAGTGGCGCCCCCCGAGGGTTCACCACTGTTTCCTGAGAAACTTCCC 3379 	3380 CAGTGCCCACCCACCGTTCTCCGTGTGCCCGAGGCCGGTCCTGGGCTAGGCTCCGCGC 3439	3440 CCCAGCCCCAAACCGGGTCCCCCTTCCAGAGAAAAGCTCCCGACGCGGATGCC 3499
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The present sequence is that of the promoter region of the human stearcyl cond desaturase-1 (hSCD1) gene. The promoter structure is similar to that of the mouse SCD1 promoter and contains conserved regulatory sequences to the human SCD1 promoter and contains conserved regulatory sequences the human SCD1 gene is regulated by polyunsaturated fatty acids and cholesterol at the level of gene transcription. The sterol regulatory clement binding protein (SRBBP) plays a role in the transcriptional element binding protein (SRBBP) plays a role in the transcriptional clement that modulate and control SCD1 expression in humans, and to intervention to modulate expression of SCD1 in humans, and to intervention to modulate expression of SCD1 in humans. The invention clements that modulate expression of SCD1 in humans, and is also provides screening assays based on the role of hSCD1 in human diseases, of sorders or conditions relating to serum levels of triglyceride, very lipoprotein, total cholesterol, or production of secretions from membranes monounsaturated fatty acids, wax esters, etc. Methods for are also provided. These disorders using modulators of SCD1 activity diverse maladies, such as cancer and multiple sclerosis, non-insulince conditional disorders include various skin diseases and diseases, and immune disorders as well as cholesterol disorders; eye inidemiae and cardinoments as well as cholesterol disorders; eye inidemiae and cardinoments as well as cholesterol disorders; eye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3459 CCCAGCCCTTCCAGAGAAAAGCTCCCGACGGGGATGCCGGGCAAGGCCCAGCGGGG 3518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identifying an agent for treating disorders related to serum levels of fatty acids and glycerols, by contacting screening assay with delta-9 stearcyl-CoA desaturase activity with compound and measuring the activity.
                                                                                                                                           "CCAAT enhancer binding protein-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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/bound_molety= "nuclear factor Y"
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11.5%; Score 450.4; DB 5;
Best Local Similarity 99.8%; Pred. No. 7.9e-83;
Matches 451; Conservative 0; Mismatches 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hayden MR, Attie AD,
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WISC ) WISCONSIN ALUMNI RES FOUND.
(UYBR-) UNIV BRITISH COLIMBIA
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/bound_moiety= "
(C/EBP-alpha)"
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/*tag= k
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2000US-0255771P.
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15-DEC-2000;
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Miyazaki M;
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CCCAGCCCCAAACCGGGTCCCCCAGCCCCTTCCAGAGAAAGCTCCCGACGGGAATGCC 1378
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(SREBP)"
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/*tag= a
/bound moiety= "SP1"
102 .169
/*tag= b
/note= "polyunsaturated fatty acid response region"
116 .121
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                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCAGCGGATAAAAGGGGGCTGAGGAAATACCGGACACGGTCACCCGGTTGC 3910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human stearoyl-CoA desaturase-1 gene promoter region.
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/bound moiety= "nuclear factor 1"
176. .Î80
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51. .154
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/bound_moiety= "SP1"
131, .140
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                                                              124 AGGGAACAGCAGATTGCGCCGAGCCAATGGCAACGGCAGGACGAGGTGGCACCAAATTCC
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14-AUG-2000;
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08-NOV-2000; 2000US-0246601P.
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06-DEC-2000;
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(HUMA-) HUMAN GENOME SCI INC.

Ruben SM; Rosen CA, Barash SC,

WPI; 2001-483426/52

Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.

Disclosure; SEQ ID NO 38065; 3071pp + Sequence Listing; English.

AMK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased that affect the activity of (I) by expressing inactive proteins or to cyplucleotides may be used to produce the secreted (I). Additionally, (I) cyplurcleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the collapse and treat immune/haemacopoietic-related diseases especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 cancers and cancer metastases of haematopoietic-derived cells. AAK64703 cancers from the present invention. AAK64922 to AAK64950 and AAM82169 crepresent invention.

Sequence 8880 BP; 2388 A; 1807 C; 1844 G; 2841 T; 0 U; 0 Other;

16; Gaps Query Match
9.9%; Score 386; DB 4; Length 8880;
Best Local Similarity 54.7%; Pred. No. 2.5e-69;
Matches 1194; Conservative 0; Mismatches 850; Indels 138;

δλ	14 TTTAAATCATACAATTTAATGGCTTTTAGTATATTCACAG-GTTGTGCATCCATC2C 69
qq	6137 TITABAGIGIGCAATIGAATAITITITIGIACATICICAGAGITGIGCAACCATIACCAC 6196
ò	129
qq	C)
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qq	6257 CTTCCAGTACCACTTTCTTCTCTCCCTTTCCCCTAGGCTATCACTAATAAACTTTCTGT 6316
à	247
ηp	6317 CTATATAGATTTGCCTATTCTGGACATTTCATATAATGGAATCATATAATATATGTGGCCT 6376
δλ	248 TITGIGACTGGCTGCTTTCACTTAGCATTCTATTTTTAAGGCTCA-TTATGTTACAGTAC 306
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δλ	366
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Dp	6515 TIGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGA 6574
λŏ	ß
QQ	6575 ATAGCTGGGATTACAGGTGCACGCCACCATGCCCAGCTAATTTTGTACTTTCAGTACACA 6634
δλ	S
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ζŏ	592 PAGGGTCTCACTTTGTTACCCAGGCTGAAGGGCAGTGGCAATGGTGACAGCTGAGCAGC 649
qq	6695 GGGAGTCTCGTCGCCCAGGCTGGAGTGCAGTGGCGCGATCTCGGCTCACTGCAAG 6754
ζ	70
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ζ	710 AACACGTGTCACCATGCCTGGCTGATATTTITTTTTTTTGAACAGGGTATCACT 763
qq	6815 GGCGCCTGCCCCCCCCCCCGCTAATTTTTAGTATTTTTAGTAGAGACGGGGTTTCACC 6874
ζ	764 CIGITGCCCAGGCTGGAGTACAGTGGGGTAATAATAGCTCACTGCAGCCTCCCGTCCTGG 823
qq	6875 GTTTAGCCAGGATGCTCTCGATCTCCTGACCTCGTGATCCACCGCCTCGGCTTCCCAA 6934
Qy	89 U
QQ	6935 AGTGCTAGTATTACAGGCTTGAGCCACGGCCCGGCCGGCC
δλ	884 AGGCCCAGCTAAATTTTAAAAAATGATTTTTGGTATAGAGGAGGTCTTGCTATGTTGCTC 943
ηρ	70
δλ	944 AGGCTGTATTTTTATTGTTGAGACAAGGTCTCACTATGTTGCCATGATCCCCCCCACCTCC 1003
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The invention relates to genes and their expression profiles are used for: (a) screening modulators of precursor stem cell differentiation into osteoblasts, or bone tissue deposition; (b) diagnosing abnormal constepling to the condition or deposition of bone tissue, abnormal rate of osteoblast formation or cateoporosis; or (c) treating or monitoring treatment of the conditions of costeoporosis; or male osteoporosis, osteoporosis; or male osteoporosis, osteoporosis; glucocorticoid osteoporosis or male osteoporosis, osteoporosis; glucocorticoid costeoporosis or male osteoporosis, osteoporosis; glucocorticoid costeoporosis or male osteoporosis, osteoporosis; glucocorticoid costeoporosis or male osteoporosis, osteoporosis; gradual disease linked to breast cancer, mastcoytosis; Fanconi syndrome or fibrous dysplasia. The present sequence is that of an osteoplast differentiation associated cDNA marker of the invention. Note: The sequence data for this patent did not form part of the printed or the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the million of the milli
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Use of genes and their expression profiles associated with osteoblast differentiation for screening modulators bone formation, for diagnosing or treating e.g. osteoporosis, or as markers for the differentiation process.
                                                                                                                                                                                                                                                                                                                                                                                          Human; osteoblast; stem cell differentiation; bone tissue deposition;
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55.4%; Pred. No. 6.3e-67;
ative 0; Mismatches 726; Indels 115; Gaps
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8193 AAAAAAAAAAAAAGAAGAAAA 8214
                                                                                                                                                                       ABQ88096 standard; cDNA; 92638 BP.
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(PROC ) PROCTER & GAMBLE CO.
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Mertz L;
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486 AGTAGCTAGGACTACAGGCACACACCATACCTGGCTAATTTTTTTT	546 TITTATGTATTCATTTTCTTTTTTTTTGTTGTTGTTTTTGAGATAGGGTCTCACTTT 605		TGCCTCAGCCTCCCAAGTAGCTGGAACTACAAACACGCGTCACCA	-TATTITITICTIGAAACAGGGTATCACTCCTGTTGCCCAGGCTG					107	4 4 11 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			1203 CAGGGGAAGAAAACTTGGGAAAATGAAGCATGTTTAGAAAATCAGCAAGGTGCAGGG 1260 	GTTTTCGGAGTTTTATTTTATATTCTGTTGACAAATGTGCAGTTTGATGAGATACAAG	55993 TGACITTGATCACCTGACTGAGGTAAACTTTGGCAGACTTCTCCATTGTAAAGTTACTCT 56934 1321 TTATACTAAGTGAGAAGTGAGAATTAAGGCTGGAATAGGGGGTTCAGAGTAAAATCATGA 1380		56873 AGAATTGGGGA-ATTATGTTCTACCTCCTTAAGGGCAGAATATCTACAGGGTTTTTGTT 56815	1500	56814 TTTTTTTTTTTTGAGATGGAGTCTCGCTCTGTTGCCCAGGCTGGAGTGCAGTGCA 56755
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2000US-022575FP.
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2000US-022947P.
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2000US-020515P.
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2000US-021813P.
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Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis.
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02-OCT-2000; 2000US-0237040P.

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activity, and can be used in gene therapy and vaccine production. (I)

activity, and can be used in gene therapy and vaccine production. (I)

proteins and polymucleotides may be used in the prevention, diagnosis and

creatment of diseases associated with inappropriate (I) expression. For

example, they may be used to treat disorders associated with decreased

example, they may be used to treat disorders associated with decreased

captients only rectifying mutations or deletions in a patient, s genome

that affect the activity of (I) by expressing inactive proteins or to

supplement the patients own production of (I). Additionally, (I)

colymucleotides may be used to produce the secreted (I), by inserting the

polymucleotides into a host cell and culturing the cell to express the

protein. (I) proteins and polymucleotides may be used to prevent,

diagnose and treat immune/haematopoietic-related diseases, especially

cancers and cancer metastases of haematopoietic-derived cells. AmK4703

cancers and cancer metastases of haematopoietic antigen genomic

cancers and present invention. AaKS4942 to AAKS4950 and AAM82169

sequences from the present invention. AAKS4942 to AAKS4950 and AAM82169 3192 crericional contrata de la contrata del contrata de la contrata del contrata de la contrata del contrata del contrata de la contrata del contrata del contrata de la contrata del contrata del contrata del contrata de la contrata del contrata del contrata del contrata del contrata del contrat 3252 3539 3483 3463 3432 3372 cccraarrantriringagacgargicicacicrarccagriggagigaataaaga 10; 480 009 9 720 761 820 880 420 GACCTCAGGTGATCCGCTCACATCAGCCTCCAAAGTGCTGGGATTACAGGCGTGAGCCA CTCTGTTGCCCAGGCTGGAGTACAGTGGCGTAATAATAATAGCTCACTGCAGCCTCC-CCTCC TGGGCTCAAGCAATCCGCTGGCCTCAGCATCCTGAGTAGCTGGGACTACAGGCTTGTGCC raderricaaderarrerecreerreaderreederadradradaarradadeedeceade 541 ITTCATTTTATGIATTCATTTTCTTTTTTTTTTTGTTGTTGTTTTTGAGATAGGGTCTC ---TTTAGTAAAGACAAGGTTTT -----CTTGAACTCAT GGGCTCAAGTGATCCTCCTGCCTCAGCTCCAAGTAGCTGGGACTACAAACACGTGTCA ------TITITITITICE GGGGTATCA rcccaagradcroddactaraddcoccaccarcacccriddcraarririgrarr----601 ACTITIGITACCCAGGCIGGAGGCAGTGGCATGGTGACAGCTGAGCAGCCTTGACTTCCT neaarchieschchchadchchchadcischiaadhaanintinchceschchedd 361 CCCATATCATATTAGAGACAGGTTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGC 421 ACAATCATAGCTCACTGTAACCTCAAACTCCTGGGCTCAAGTGATCCTACTACTCCAGCC Gaps Indels 178; Sequence 5491 BP; 1662 A; 1226 C; 1439 G; 1164 T; 0 U; 0 Other; DB 4; Length 5491; 9.4%; Score 368.8; DB 4; 56.0%; Pred. No. 7.5e-66; ative 0; Mismatches 627; 3462 GCCATGTTGGCCAGGCTGGT CCATGCCTGGCTGATA-Query Match
Best Local Similarity 56.0
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1361 CGTTCAGAGT?          2765 TCTTGTGATC1	- 2
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1481 CTGGCTGGAG                 2664 CAGGCTAGAG	154
1541 CAATTCTCCT(         2604 CAATTCTTGC	4 0
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1711 GGCCCCCAGA         2424 GAGCCACCAT	r 17     23
1771 GTCACTTGAG 2364 TTATGTTAGG	4 183 4 230
1831 GAGAAATAGA    2304 AGCAAGGCAC	3 189     224
1891 CACTTTGGGA            2244 CACTTTGGGA	C 19 C 21
1951 CAACATGGTG          2186 TAACTCGGTG	C 201 G 212
2011 ATGCCTGTAA         2126 GTGCCTGTAG	G 206
2071 CAGAGGTTGC 	4-4
2131 CTTCCTCTC7	arabarakarararara 2158 

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Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase; ligase, hyperproliferative disorder; immunodeficiency disorder; autoimmune disorder; neurological disorder, metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; blood-related disorder; infectious disorder; gene therapy; cytostatic; anti arthritic; nephrotropic; anticoagulant; ds.
                                                                              Genomic sequence #331 encoding novel human enzyme polypeptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGTGGATCACCTGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAACCCCG 1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1969 TCTCTACTAAAAATACAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCAGCT 2028
                                                                                                                                                                                                                                                                                                                                                                                                                         The present genomic sequence is that of human pituitary adenylate cyclase activating polypeptide (PACAP). This gene is localised to the short arm of chromosome 18p11 and synthesised in the retinal ganglion cells. The gene missed has a dinucleotide repeat polymorphism marker known as W1440 and am STS marker, ADCYAP1 is located in the 3'UTR. These markers are useful to map the gene physically and genetically to the chromosome 18. This sequence can be used to design probes for detecting the presence or absence of a mutation in the wild type PACAP gene. It is also useful for genetic diagnosis of neuropsychiatric disorders like bi- polar affective disorder(BP-I) and schizoaffective disorders like bi- polar which are more valid than current clinical diagnosis based on clinical observation and subjective reports. It is used for identifying compounds that modulate PACAP gene expression which are medit for treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20507 TGGGCGGATCAC--GAGGTCAGGAGATCGAGACCATCCTGGCTAAAACGGTGAAAACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20031 ACAACTTTATTTATTTATTTATTTTGAGAAGGAGTCTCGCTCTGTTGCCCAGGCTGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20327 CCGTGCCTGGCCTAACAATTGTATTTAGACGGTGGATAGATGATTATTATTGTGCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20387 TCTAGTTGTATCCAAAAACTCAAAATAAGAAGTTAAACCAAAATAGGCACATTTAAGAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                            Use of a gene linked to the region of a chromosome associated with neuropsychiatric disorders, especially for diagnosis of bi-polar affective disorder and schizoaffective disorder manic type.
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Pred. No. 5.5e-63;
                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 2A-2U; 99pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to an antisense compound 8 to 30 nucleobases in length targetted to a nucleic acid encoding glycogen synthase kinase 3 alpha. The antisense compound specifically hybridises with and inhibits the expression of glycogen synthase kinase 3 alpha. The antisense compound is useful for the treatment of a diseases associated with glycogen synthase kinase 3 alpha such as diabetes, a neurological disorder, a haemacopoietic disorder, a hyperproliferative disorder or a developmental disorder. The antisense compounds may also be used prophylactically to prevent or delay infection, inflammation or tumour formation. The present genomic DNA sequence encodes human glycogen synthase kinase 3 alpha protein
                                                                                                                                                                                                                                                        Antisense compound 8 to 30 nucleobases in length comprising a compound that its targeted to a nucleic acid molecule encoding glycogen synthase kinase 3 alpha, useful for the treatment of e.g. diabetes and hyperproliferative disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              550 ATGTATTCATTTCTTTCTTTTTTTTGTTGTTTTTGAGATAGGGTCTCACTTTGTTA
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                                                                                ACTTGGGAGGGTGAGGCAGGAGAATTTCTTGAACCCGGGAGGCAGAGGTTGCAGTGAAGC
                                                        20625 ACTCGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCCGGAGGCGGAGCCTTGCAGTGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                         product= "Human glycogen synthase kinase 3 alpha"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated nucleic acid molecule encoding a reproductive system antigen is used in preventing, treating or ameliorating a medical condition.
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8.9%; Score 349; DB 4; Length 13216;
Best Local Similarity 70.0%; Pred. No. 1.1e-61;
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                 Sequence 13216 BP; 3041 A; 3400 C; 3243 G; 3532 T; 0 U; 0 Other;
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Best Local Similarity 70.0%;
Matches 516; Conservative
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1244 TCAGCAAGAGTGCAGGGTTTTTTCGGAGTTTTTATATTTCTGTTGACAAATGTGCAG 1303
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                                                                                                                                                                                                                                                                                                                           The invention relates to an isolated nucleic acid molecule (I) comprising a nucleotide sequence given in Tables 1-9 (ABV0010-ABV62213) of the specification or its complement. (I) is useful for: (a) assessing whether progression of prostate cancer; (b) monitoring the progression of prostate cancer in a patient; (d) assessing the efficacy of a therapy for inhibit ing prostate cancer in a patient; (d) assessing the efficacy of a therapy for inhibiting prostate cancer in a patient; (f) assessing the prostate cell carcinogenic potential of a compound; (g) determining whether prostate cell carcinogenic potential of a compound; (g) assessing the aggressiveness or indolence of prostate cancer in a patient; (i) is also useful as a pharmacodyanamic or pharmacogenomic marker
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                                                                                                                                                                                                                                                                  prostate cells and correlating with presence of prostate cancer, useful for detecting presence of prostate cancer, stage of prostate cancer.
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tive 0; Mismatches 4
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      Homo sapiens
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reproductive system related antigen; reproductive system disorder;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated nucleic acid molecule encoding a reproductive used in preventing, treating or ameliorating a medical
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                                                                                     Human testicular antigen encoding DNA fragment SEQ ID NO: 2665.
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17-MAR-2000; 2
19-MAY-2000; 2
19-MAY-2000; 2
28-JUN-2000; 2
20-JUN-2000; 2
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11-JUL-2000; 2
11-JUL-2000; 2
14-JUL-2000; 2
26-JUL-2000; 2
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24-FEB-2000;
02-MAR-2000;
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17-MAR-2000;
18-APR-2000;
19-MAY-2000;
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07-JUL-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic acids encoding 973 human testicular antigen polypeptides, useful for preventing, diagnosing and/or treating testicular cancer.
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14-AUG-2000; 2000US-0225213P.
14-AUG-2000; 2000US-0225213P.
14-AUG-2000; 2000US-0225214P.
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14-AUG-2000; 2000US-0225264P.
16-SEP-2000; 2000US-0223209P.
16-SEP-2000; 2000US-0232309P.
14-SEP-2000; 2000US-0232309P.
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## (HUMA-) HUMAN GENOME SCI INC

Rosen CA, Barash SC, Ruben SM

WPI; 2001-465566/50

Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cancerous diseases.

Disclosure; SEQ ID NO 2140; 1180pp; English.

The present invention relates to the isolation of novel human enzyme polypeptides (AAU22915-AAU23814), and the CDNA and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidoreductases, transferases, hydrolases, lyases, isomerases or ligases. The sequences of the invention are useful in the diagnosis, treatment, prevention and/or prognosis of a wide range of immunodeficiency disorders leg. Alzheimer (e.g. cancer), immunodeficiency disorders (e.g. Alzheimer's disease), metabolic arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic cardiovascular disorders (e.g. atherosclerosis), blood-related disorders (e.g. therosclerosis), blood-related disorders (e.g. therosclerosis), blood-related disorders infectious disorders (e.g. Influenza). The polynucleotides of the

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invention can also be used in gene therapy. AAS41685-AAS42192 represent DNA sequences encoding for the novel human enzyme polypeptides of the invention. Note: The sequence data for this patent did not form part of
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4 G	Sequence 6437	BP; 1690 A; 1641 C; 1586 G; 1520 T; 0 U; 0 Other;
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λ		CAGTGGCGTAATAATAATGCTCACTGCAGCCTC-CCCTCCTGGCCTCAAGCAATCCGCTGGC 842
ð	2704 CAGTO	BGTGCAGTCTCAACTTACTGCAACCTCTGCGTCCTAGGTTCAAGCAATTCTCATGC 2645
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ą Q	2644 CTCA	SCTTCCCAAGTAGATGGGACTACAGGCATGTGCCACCACGCCTGGCTAATTTTAT 2585
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7 A		GACCTCAAGTGATCCGCCCACTCCGCCTCCCAAAGTGTTGGGA 2485
ž	1023 TTAT	TTATCTGTTCATTAGTCAGTTGACAGACATTTAGGTTGTTTCGACTTTTTGACCATTATG 1082
q	 2484 TTAT	TIATAGGCGTGAGCCACGCCATCGAGTGCATGAACTATTAAAGGGCCAGTCATTGATC 2425
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à	1143 TGGG	TGGGTTTATATATCTAGGAGTGGAATTGCTGGATCCCGGGTAATATTTTGACAGGCAGAGTT 1202
ą	2364 TAGO	CCATITIACAGAIAGGACCAGIGAGGATCITAGGGAAT 2323
à	1203 CAGG	CAGGGGAAGAAAAACTIGGGAAAAIGAAGCAIGITIAGAAAICAGCAAG-AGIGCAGGG 1261
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APPLICANT: Brett P. Monia
APPLICANT: Robert McKay
APPLICANT: Robert McKay
APPLICANT: Robert McKay
APPLICANT: Adeline M. Butler
APPLICANT: Jacqueline M. Butler
APPLICANT: Jacqueline Myatt
TITLE OF INVENTION: RTS-011
FILE REFERENCE: RTS-012
CURRENT FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14;
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Pred. No. 5.9e-77;
0; Mismatches 742;
US-09-818-512-3
US-08-814-095-7
US-09-345-882-11
US-09-108-006C-3
US-08-724-394A-20
US-08-724-394A-21
US-08-724-394A-21
US-09-818-512-3
US-09-818-512-3
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US-09-818-512-3
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US-09-818-512-3
US-09-818-512-3
US-09-818-512-3
US-09-818-512-1
US-09-146-053-6
US-09-146-053-6
US-09-435-739-42
US-09-435-739-42
                                                                                                                                                                                                                              ALIGNMENTS
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; Sequence 10, Application US/09488856A
; Patent No. 6316259
; GENERAL INFORMATION:
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Best Local Similarity 55.2%;
Matches 1016; Conservative
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CDS
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LOCATION: (115)...(397)
NAME/KEY: CDS
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ORGANISM: Homo sapiens
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430 GCTCACTGTAACCTCCTGGGGTCAAGTGATCCTACCT  364 GCCGCTACAACCTCTGCCTCCAGGTTCAAGCGATTCTTGTGCCT  490 GCTAGGACTACAGCCACACAGGCATACCTGGCTAATTTTTTTT		848 CATCCTGAGTAGCTGGGACTACAGGCTTG 4075 CTCCCTAGTAGCTGGGACTACAGGGGGGGGGGGGGTGTTTTTGGTATAGAGGAGGTCTTGCTAT 4135 CTAGTAGGGACGGGGTTTCACCGAGTTAGGGACGGGGTTTCACCGAGTTAGGGGTTTAGGTTAGGTTAGGTTAGTTAGTTAGAGGTTAGGTTAGTTAGATCTTAGTTAG	1020 ATCTFATCTGTTCATTAGTCAGTTGACAG 4255 CTGCAACCTCTGCCTCTGGGTTCAAGGG 1080 ATGAATAATACTCCAGTGAATATTCATG 4315 TCTTGTACCTCATCCACTGAGTAGTTGG 1140 TGTTGGGTTTATATCTAGGAGTGGAATTG 4379 ATTTTTTGTATTTTAGTAGGAGTGGGATTG	1200 GTTCAGGCGAAGAAA

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Sequence 3, Application US/09797906
Patent No. 6329188
GENERAL INFORMATION:
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GENERAL INFORMATION:
TITLE OF INVENTION: ISOLATED HUMAN PROTEASE PROTEINS,
TITLE OF INVENTION: USES THEREOF
TITLE OF INVENTION: USES THEREOF
FILE OF INVENTION: USES THEREOF
FILE OF INVENTION: USES THEREOF
CURRENT APPLICATION NUMBER: US/09/797,906
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 5
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
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                 GGAGTGCAGTGGCGCGATCTCAGCTCACTGCAAGCTCCGCCTCCTGGGTTCACGCCATTC
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NAME/KEY: misc_feature
COATION: (1)...(84495)
CTHER INFORMATION: n = A,T,C or
US-09-797-906-3
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ORGANISM: Human
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US-09-797-906-3/c
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CTAAGTGTGGTGGCGATGCCTGTAATCCCAGCTACTTGGGAGGGTGAGGCAGGAGATT
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                                                                                                                                                               C-ACTITGITGGCCAAGCTGGTCTCAAACTTTT
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MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Sequence 3, Application US/09108006C; Patent No. 6524613; GENERAL INFORMATION:
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US-09-108-006C-3/c
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                                                                                          carragreaccaccacrarriararararararararararararari
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                                                                                                                             CACACACACATACCTGGCTAATTTTTTTTTTAATTTTTATGTATTCATTTTC
                                                                     445 AAACTCCTGGGGTCAAGTGATCCTACTACCTCAGCC-TCCAGAGTAGCTAGGACTACAGG
                                              Gaps
                                              85;
                Score 345; DB 4; Length 84495;
Pred. No. 2.6e-75;
0; Mismatches 715; Indels 85
                      Query Match
Best Local Similarity 55.0%;
Matches 979; Conservative
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1456 TCCCAGCCAGGTGCGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGATCGAAACGGG 1397
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                                                                                                                                                                               1336 TACTGAAAATACAAAAAATTAGTCGGGTGTGGGGGGGGCATGTGCCTGTAGTCCCCAGCTACT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Soreq, Hermona
APPLICANT: Zakut, Haim
APPLICANT: Shari, Moshe
TITLE OF INVENTION: TRANSGENIC ANIMAL ASSAY SYSTEM FOR
TITLE OF INVENTION: ANTI-CHOLINESTERASE SUBSTNACES
TOORRESPONDENCE ADDRESS:
ADDRESSEE: KOHN & ASSOCIATES
STREET: 30500 No. 6021183thwestern Highway, Suite 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, Version #1.30
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REGISTRATION NUMBER: 38,972
REFERENCE/DOCKET NUMBER: 2391.00066
TELEPHONE: (248) 539-5050
TELEPHONE: (248) 539-5055
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 35060 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: double
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APPLICATION NUMBER: US/08/814,095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 7, Application US/08814095
Patent No. 6025183
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 48334
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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ORGANISM: Homo sapiens
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 7Q22
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 30500 No. 60251
CITY: Farmington Hills
STATE: Michigan
COUNTRY: U.S.
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CLASSIFICATION: 800
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Similarity 68.3%; Pred. No. 2.2e-70;
96; Conservative 0; Mismatches 216; Indels 14;
OPERATING SYSTEM: DOS SOCTAME: DOS SOCTAMES: FastSOG for Windows Version 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/108,006C FILING DATE: 30-Jun-1992 CLASSIFICATION: <UNKnown>PRIOR APPLICATION DATA:
                                                                                                                                                    APPLICATION NUMBER: 60/054,288
FILING DATE: 30-APR-1997
APPLICATION NUMBER: 60/054,837
FILING DATE: 05-AUG-1997
APPLICATION NUMBER: 60/064,996
FILING DATE: 10-NOV-1997
APPLICATION NUMBER: 60/074,497
FILING DATE: 12-FEB-1998
APPLICATION NUMBER: PCT US 98/08834
FILING DATE: 30-APR-1998
APPLICATION NUMBER: PCT US 98/08834
FILING DATE: 30-APR-1998
ATTORNEY/AGENT INFORMATION:
NAME: Friebel, Thomas
REFERENCE/DOCKET NUMBER: 7991-015-999
TELEROMATION: 115-504-4444
TELEFRONE: 215-504-4444
TELEFRONE: 215-504-4444
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) CTHER INFORMATION: EXON 1
; SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-108-006C-3
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SEQUENCE CHARACTERISTICS:
LENGTH: 3805 base pairs
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STRANDEDNESS: single
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NAME/KEY: exon
LOCATION: 24090.25177
LOCATION: 24090.25177
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LOCATION: ALROWATION / function= "(translation start: OTHER INFORMATION: 4-110)"
OTHER INFORMATION: Avidence EXPERIMENTAL OTHER INFORMATION: Avidence = "ACHE"
FEATURE:
NAME/KEY: exon
LOCATION: 25524.2609
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LOCATION: Avidence EXPERIMENTAL OTHER INFORMATION: Avidence = EXPERIMENTAL OTHER INFORMATION: Avidence = EXPERIMENTAL OTHER INFORMATION: Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = Avidence = 
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MMATION: /function= "arsenite resistance
                                                     LOCATION: 4089..22464
OTHER INFORMATION: /function= "ACHE Promotor"
OTHER INFORMATION: /standard_name= "ACHE Promotor"
                                                                                                                                                                FEATURE:
NAME/KEY: exon
LOCATION: 22465.22537
OTHER INFORMATION: /function= "non-translated"
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /mumber= 1
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: exon
LOCATION: 27005..27274
IDENTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /gene="ACHE"
OTHER INFORMATION: /number= 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: exon
LOCATION: 27255..28007
IDENTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence=EXPERIMENTAL
OTHER INFORMATION: /gene="ACHE"
OTHER INFORMATION: /gene="ACHE"
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IDENTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /number= 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: complement (33779..33963)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon complement (33493..33591)
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 2
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/number= 1
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LOCATION: 28129..28131
FEATURE:
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OTHER INFORMATION:
OTHER INFORMATION:
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OTHER INFORMATION:
FEATURE:
                NAME/KEY: promoter
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NAME/KEY:
LOCATION:
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FEATURE:
NAME/KEY:
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1505 CTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCTGCTTCAGCCTCCCA 1564
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 8.2%; Score 321; DB 3; Length 35060; Best Local Similarity 68.8%; Pred. No. 1.6e-69; Matches 511; Conservative 0; Mismatches 205; Indels 27; Gaps
                                     FEATURE:
NAME/KEY: exon
LOCATION: complement (33297..33408)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /mumber= 5
FEATURE:
NAME/KEY: exon
LOCATION: complement (32959..33094)
OTHER INFORMATION: /gene= "AR"
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NAME/KEY: exon
LOCATION: complement (31363..31534)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 10
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LOCATION: complement (30816..31011)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 12
FEATURE:
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number='14
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 15
FEATURE:
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COTHER INFORMATION: /gene= "ARS"

US-08-814-095-7
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LOCATION: complement (32569..32628)
OTHER INFORMATION: /gene="AR"
OTHER INFORMATION: /number= 7
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LOCATION: complement (32386..32468)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 8
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LOCATION: complement (31894..32080)
OCHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 9
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 11
FBATURE:
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LOCATION: complement (30470..30626)
OCHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 13
/gene= "AR"
/number= 4
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LOCATION: compl
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NAME/KEY: exon:intron junction
LOCATION: (348578)...(348579)
OTHER INFORMATION: exon 10:intron 10
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OTHER INFORMATION: unknown
NAME/KEY: mise feature
LOCATION: (2027)1 ... (202870)

OTHER INFORMATION: n = A,T,C or G
NAME/KEY: mise feature
LOCATION: (206246 ... (215602)

OTHER INFORMATION: n = A,T,C or G
NAME/KEY: mise feature
LOCATION: (2018126)

OTHER INFORMATION: n = A,T,C or G
OTHER INFORMATION: n = A,T,C or G
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (230256)
COTHER INFORMATION: n = A,T,C or G
NAME/KEY: misc_feature
LOCATION: (232299)...(232398)
OTHER INFORMATION: n = A,T,C or G
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CCCATION: (223717)...(222816)
OTHER INFORMATION: n = A,T,C or G
NAME/KEY: misc_feature
LOCATION: (223981)...(224080)
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (236552)...(236651)
OTHER INFORMATION: n = A,T,C or G
NAME/KEY: misc_feature
LOCATION: (238789)...(248789)
OTHER INFORMATION: n = A,T,C or G
                    NAME/KEY: unsure
LOCATION: 145507
OTHER INFORMATION: unknown
NAME/KEY: unsure
LOCATION: 151967
OTHER INFORMATION: unknown
NAME/KEY: misc_feature
LOCATION: (151967)...(1542066)
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (186224)...(186323)
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (195242)...(195341)
DTHER INFORMATION: n = A,T,C or G
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LOCATION: (220360)...(220459)
OTHER INFORMATION: n = A,T,C or G
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THER INFORMATION: n = A,T,C or G
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OTHER INFORMATION: exon 1C
MAME/KEY: exon:intron junction
LOCATION: (151129) ... (151130)
OTHER INFORMATION: exon 5:intron
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LOCATION: (299248)...(299249)
OTHER INFORMATION: exon 9:intron
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LOCATION: (174657)...(174756)
OTHER INFORMATION: n = A,T,C or
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n = A,T,C or
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  THER INFORMATION:
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LOCATION: 154217
OTHER INFORMATION:
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Sequence 11, Application US/10027983

FREEN NO. 6617162

GENERAL INFORMATION:

APPLICANT: Mark P. Roach

APPLICANT: MARK P. Roach

TILL OF INVENTION: ANTISENSE MODULATION OF ESTROGEN RECEPTOR ALPHA EXPRESSION

CURRENT APPLICATION NUMBER: US/10/027,983

CURRENT FILING DATE: 2001-12-18

NUMBER OF SEQ ID NOS: 98

SEQ ID NO 11

LENGTH: 392000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .0342 GAAACCCCATCTTCTACTAAAA-ATACAAAATTAGCCAGGTGTGGTGGCGCATGCCTGTA 10400
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                                                                                                                                                                                                                       9982 GACAGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAATCCTGGCCTCAAGTGATCTGCC 10041
                                                                                                                                                                                                                                                                                                                      2138
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                                                                             1624
                                                                                                                    9922 AATAGCTGGGATTACCAGTGCCCACCACCACCAGCTAATTTTTATATTTCAGTAGA 9981
                                                                                                                                                                             1625 GATGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACTTTTTGCTGTCATAATTGTTGT 1684
                                                                                                                                                                                                                                                                             ----CAGTGTGACCAGGGCCTCAGGAGTAGAGGTGATCTCTGCTCGAAAGAGAAATAG 1839
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  9862 CTGGGCTCACTGCAACCTCTGCCACCCAGGTTCAAGCAATTTTCCTGTGTCAGGCTCCCA
                                                                                1565 AGTAGCTGGGACTACAGGCACTTCCCACCATGCCCAGCTGATTTTTGTATTTTTAGTAGA
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LOCATION: 137740
OTHER INFORMATION: unknown
NAME/KEY: unsure
LOCATION: 137742
OTHER INFORMATION: unknown
NAME/KEY: misc feature
LOCATION: (138122)...(138221)
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GENERAL INFORMATION:
APPLICANT: YAN, Chunhua et al.
APPLICANT: YAN, Chunhua et al.
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CLOOL178
CURRENT APPLICATION NUMBER: US/09/813,817
CURRENT FILING DATE: 2001-03-22
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FASELSEQ for Windows Version 4.0
                                                                                                                                                                 ; TYPE: DNA
; ORGANISM: Human
US-09-813-817-3
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                                                                                                               Length 392000;
                                                                                                                                           43;
                                                                                                             Query Match 8.2%; Score 319.8; DB 4; Length Best Local Similarity 67.2%; Pred. No. 1.1e-68; Matches 533; Conservative 0; Mismatches 217; Indels
     NAME/KEY: intron
LOCATION: (348579)...(381838)
OTHER INFORMATION: intron 10
NAME/KEY: intron:exon junction
LOCATION: (386185)...(386186)
OTHER INFORMATION: intron 11:exon 12
US-10-027-983-11
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Sequence 3, Application US/09813817 Patent No. 6340583

RESULT 6 US-09-813-817-3/c

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11749 AGAATTGCTTAAACCCGGGAGGCAGAAGTTGCAGTGAGCCGAAATTGTGCCACTGCACTC 11690
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                                                                                                            1339 GAGAATTAAGGCTGGAATAGGGCGTTCAGAGTAAAATCATGAAGCACTTTGAATACCAAA
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                                                                                                                                                                                                                                                                                                                                                                Length 59065,
Score 316.6; DB 4; Length
Pred. No. 2.6e-68;
0; Mismatches 264; Indels
     Query Match
Best Local Similarity 66.7%;
Matches 561; Conservative
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Sequence 3, Application US/09804471A

Sequence 3, Application US/09804471A

Sequence 3, Application US/09804471A

Sequence 3, Application US/0980471A

FIGURARY: WEBSTER, Marion et al

TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC

TITLE OF INVENTION: THEREOF

TITLE OF INVENTION: THEREOF

TITLE OF INVENTION: THEREOF

TITLE OF INVENTION: THEREOF

TITLE OF INVENTION: UNMBER: US/09/804,471A

CURRENT APPLICATION NUMBER: US/09/804,471A

CURRENT FILING DATE: 2001-03-13

NUMBER OF SEQ ID NOS: 4

SOSTWARE: FRSESEQ for Windows Version 4.0
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                   AGGAGTICAAAACCAGCCIGGCCAACAIGGIGAAACCCCCGICTCTACTAAAAATACAAAA 1988
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                                               11749 AGAATTGCTTAAACCCGGGAGGCAGAACTTGCAGTGAGCCGAAATTGTGCCACTGCACTC
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                                                                                                  AATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCCAGCTACTTGGGAGGGTGAGGCAGG
                                                                                                                                                                                                                                                                 Query Match 8.0%; Score 312.4; DB 4; Length 174493; Best Local Similarity 61.7%; Pred. No. 5.2e-67; Matches 490; Conservative 0; Mismatches 298; Indels 6;
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NAME/KEY: misc_feature
LOCATION: (1)...(174493)
OTHER INFORMATION: n = A,T,C or G
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US-09-804-471A-3
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                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: YAN, Chunhua et al.
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REPERENCE: CL001178DIV
CURRENT APPLICATION NUMBER: US/09/978,197
CURRENT APPLICATION NUMBER: 09/813,817
PRIOR FILING DATE: 2001-03-22
NUMBER: OF SEQ ID NOS: 4
SEQ TEAM PRESENCE SEQ FOR Windows Version 4.0
SEQ ID NO 3
LENGTH: 59065
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Pred. No. 2.6e-68;
0; Mismatches 264;
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Patent No. 6403353
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Best Local Similarity 66.7%;
Matches 561; Conservative
                                                                                                    11629 A 11629
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ORGANISM: Human
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ACRIANT: BOUGUELEREL, Lydie
TITLE OF INVENTION: A NUCLEIC ACID ENCODING A RETINOBLASTOMA BINDING PROTEIN (RBP-7)
TITLE OF INVENTION: AND POLYMORPHIC MARKERS ASSOCIATED WITH SAID NUCLEIC ACID.
FILE REFERENCE: GENSET.031A
CURRENT APPLICATION NUMBER: US 60/991,315
PRIOR APPLICATION NUMBER: US 60/991,315
PRIOR APPLICATION NUMBER: US 60/991,315
PRIOR FILING DATE: 1998-06-30
PRIOR FILING DATE: 1998-10-10
NUMBER OF SEQ ID NOS: 140
SOFTWARE: PATENT.DATE: US 60/111,909
SOFTWARE: PATENT.DATE: US 60/111,909
SOFTWARE: PATENT.DATE: US 60/111,909
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TAGAGATGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACTTTTTGCTGTCATAATTG 1680
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NAME/KEY: allele
LOCATION: 72794
OTHER INFORMATION: 5-124-273 : polymorphic
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Patent No. 6399373
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ORGANISM: Homo sapiens
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CURRENT FILING DATE: 2002-09-11
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 4.0
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                                                                                     AGGCGTGGTGGCTCTTTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCAC
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61.7%; Pred. No. 5.2e-67;
tive 0; Mismatches 298;
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.CTHER INFORMATION: n = A,T,C or G
US-10-238-709-3
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Patent No. 6680188
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Best Local Similarity 61.7
Matches 490; Conservative
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ORGANISM: Human
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NAME/KEY: allele
LOCATION: 146345
OTHER INFORMATION: 5-143-101 : polymorphic base A
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LOCATION: 88073
OTHER INFORMATION: 5-127-261 : polymorphic base
FEATURE:
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NAME/KEY: allele
LOCATION: 93714
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LOCATION: 90842
OTHER INFORMATION: 99-1437-325
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LOCATION: 108471
DIHER INFORMATION: 5-136-174
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NAME/KEY: allele
LOCATION: 99098
OTHER INFORMATION: 5-130-257
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NAME/KEY: allele
LOCATION: 103806
DTHER INFORMATION: 5-131-395
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NAME/KEY: allele
LOCATION: 108308
DIHER INFORMATION: 5-135-357
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LOCATION: 134134
DTHER INFORMATION: 5-140-120
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LOCATION: 134362
DTHER INFORMATION: 5-140-348
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STHER INFORMATION: 5-129-144
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NAME/KEY: allele
LOCATION: 99117
OTHER INFORMATION: 5-130-276
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OCATION: 106940
WHER INFORMATION: 5-133-375
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OCATION: 108106
OTHER INFORMATION: 5-135-155
FBATURE:
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THER INFORMATION: 5-135-198
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NAME/KEY: allele
LOCATION: 146328
OTHER INFORMATION: 5-143-84
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NAME/KEY: allele
LOCATION: 134374
OTHER INFORMATION: 5
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NAME/KEY: allele
LOCATION: 90819..90865
DTHER INFORMATION: complement polymorphic fragment 99-1437-325 SEQ ID49
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OTHER INFORMATION: complement polymorphic fragment 99-1437-325 SEQ ID70
                                                E
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LOCATION: 97099..97145
OTHER INFORMATION: polymorphic fragment 99-1442-224 SEQ ID50
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OTHER INFORMATION: polymorphic fragment 99-1442-224 SEQ ID71
                                                                                                                                                                                                                                                                                                               CCATION: 88050..88096
THER INFORMATION: polymorphic fragment 5-127-261 SEQ ID31
FEATURE:
NAME/KEY: allele
LOCATION: 88050..88096
OTHER INFORMATION: polymorphic fragment 5-127-261 SEQ ID52
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LOCATION: 99094..99140
OTHER INFORMATION: polymorphic fragment 5-130-276 SEQ ID56
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LOCATION: 103783..103828
OTHER INFORMATION: polymorphic fragment 5-131-395 SEQ ID36
                                                                                        NAMB/KEY: allele
LOCATION: 72771..72817
OTHER INFORMATION: polymorphic fragment 5-124-273 SEQ ID30
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LCCATION: 97130..97177
OTHER INFORMATION: polymorphic fragment 5-129-144 SEQ ID33
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NAME/KEY: allele
LOCATION: 97130..97177
OTHER INFORMATION: polymorphic fragment 5-129-144 SEQ ID54
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LOCATION: 99075..9121
OTHER INFORMATION: polymorphic fragment 5-130-257 SEQ ID55
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DTHER INFORMATION: polymorphic fragment 5-130-276 SEQ ID35
                                                                                                                                                                                        NAME/KEY: allele
LOCATION: 72771...72817
OTHER INFORMATION: polymorphic fragment 5-124-273 SEQ ID51
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COCATION: 99075..99121
OTHER INFORMATION: polymorphic fragment 5-130-257 SEQ ID34
FEATURE:
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NAME/KRX: allele
LOCATION: 93690..93736
OTHER INFORMATION: polymorphic fragment 5-128-60 SEQ ID32
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OTHER INFORMATION: polymorphic fragment 5-128-60 SEQ ID53
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                                                  : polymorphic
NAME/KEY: allele
LOCATION: 160031
OTHER INFORMATION: 5-148-352
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NAME/KEY: allele
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NAME/KEY: allele
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GENERAL INC. 03.130.
GENERAL INC. 03.130.
GENERAL INC. 03.130.
APPLICANT: Li. Jiayin et al
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION: THEREOF
TITLE OF INVENTION NUMBER: US/09/735,934A
CURRENT APPLICATION NUMBER: US/09/735,934A
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FASTSEQ for Windows Version 4.0
SEQ ID NO 3
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  1992 TAGCTAAGTGGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGGTGAGGCAAGAAA
                                          86253 TAGCCAGGCATGGTGGCGGTGCCTGTAATCCCAGCTACTCTGGAGGCTGAGGCAGGAGA
                                                                                          2052 ATTICITGAACCCGGGAGGCAGAGGTTGCAGTGAAGCGAGATCACACCACTGCACTCCAG
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Patent No. 6372468
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Matches 491; Conservative
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US-09-735-934A-3
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7.9%; Score 308.2; DB 4; Length 162450;
Best Local Similarity 66.7%; Pred. No. 5.6e-66;
Matches 529; Conservative 0; Mismatches 233; Indels 31;
                                                                                                                                                                                                                                                                                                                                ID38
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                                                      OTHER INFORMATION: polymorphic fragment 5-131-395 SEQ ID57
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LOCATION: 108084...108130
OCHER INFORMATION: polymorphic fragment 5-135-155
FEATURE:
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LOCATION: 108127..108177
OTHER INFORMATION: polymorphic fragment 5-135-198
FEATURE:
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OTHER INFORMATION: polymorphic fragment 5-135-198
                                                                                                   NAME/KEY: allele
LOCATION: 106918..106966
OTHER INFORMATION: polymorphic fragment 5-133-375
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OTHER INFORMATION: polymorphic fragment 5-133-375
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LOCATION: 108084..108130
OTHER INFORMATION: polymorphic fragment
       NAME/KEY: allele
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US-09-851-896-3/c
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APPLICANT: LI, Jiayin et al
ATITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND
TITLE OF INVENTION: THEREOF
 TGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAAACCCCGGTCTCTACTAAAAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: CL000851DIV
CURRENT APPLICATION NUMBER: US/10/060,332
CURRENT FILING DATE: 2002-02-01
SUUMBER OF SEQ ID NOS: 4
SOFTWARE: FASELSEQ FOR WINDOWS Version 4.0
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US-10-060-312-3
; Sequence 3, Application US/10060332
; Patent No. 6528294
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LENGTH: 43950
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GENERAL INFORMATION:
APPLICANT: C. Frank Bennett
APPLICANT: S. Frank Bennett
APPLICANT: S. Frank Bennett
APPLICANT: ANdrew T. Watt
ITLE OF INVENTION: EXPRESSION
FILE REFERENCE: RTS-0220
CURRENT APPLICATION NUMBER: US/09/851,896
CURRENT FILING DATE: 2001-05-08
NUMBER OF SEQ ID NOS: 89
SEQ ID NO 3
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Patent No. 6410325
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Best Local Similarity 70.2<sup>3</sup>
Matches 504; Conservative
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1092 CCAGTGAATATTTTAGTGGAGAAGGGGTTTCACCATGTTGGCCAGGCTGGTCTCGAACT 32381  1092 CCAGTGAATATCATGTATACATTTGTGTGGGCATATGTTTTCATTT 1138	TCAGCAAGAGTGCAGGGGTTTTTCGGAGTTTTATATTTGTTTTGTTGGTGCAAATGTGCGGGGGGGG	1844 ATMINISTRIPTITITITITITITITITITITITITITITITITITI
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Db   CCTCAGGAGTAGGTTACCTTTTATGGTTGGCACTGGATGGATGGCCATTTA 50058	QY         1980 AATACAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGG         2039           Db         49877 AATACAAAATTAGCCAGGTGGGGATGCCTGTAATCCCAGCTACTCGGGAAGC         49820           QY         2040 TGAGGCAGGAGAATTCTTGAACCCGGGAGGCAGAGGTTGCAGTGAACTACACCC         2099           Db         49819 TGAGGCAGGAGAATTCGTTGAACCCAGGAGGCAGAGGTGCGCAGAGTCGTGCC         49760           QY         2100 ACTGCACTGCAGCGGAGACAGAGCTTCCTCTCAAAAAAACAAAAAACAA         2156           Db         49759 ATTGCACTCCAGCCTGGGCAAACTCTCTCAAAAAAAAAA	RESULT 14  19 Sequence 3, Application US/09820924  19 Sequence 3, Application US/09820924  19 Sequence 3, Application US/09820924  10 Sequence 3, Application US/09820924  10 Sequence 3, Application Session 4.0  11 TITLE OF INVENTION: ISOLATED HUMAN ENTYNE PROTEINS, NUCLEIC CORRECT EMPORATION: ISOLATED HUMAN ENTYNE PROTEINS, AND USES TITLE OF INVENTION: ISOLATED HUMAN ENTYNE PROTEINS, AND USES TITLE OF INVENTION: ISOLATED HUMAN ENTYNE PROTEINS, AND USES TITLE OF INVENTION: ISOLATED HUMAN ENTYNE PROTEINS, AND USES TO TOWNER. PROLIGEOUS AND USES TO SECOND MOUNTS. 4  CORRENT PRILING DATE: 2001-03-30  NUMBER OF SECOND MOS: 4  CORRENT PRILING DATE: 2010-03-30  OMENTY MATCH.  TYPE: DATE: 2010 MOS: 4  CORRENT SALEND (FIRM MINIOR VERSION 4.0  SOSTWARS: Human  US-09-920-924-3  CORRENT SALEND (FIRM MINIOR VERSION 4.0  SOSTWARS: Human  US-09-920-924-3  TARE TO THE OFFICE OFFICE AND US SECOND MOUNTS AND US SECOND US

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1561 CCCAAGTAGCTGGGACTACAGGCACTTCCCACCATGCCCAGCTGATTTTTTTAG 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5989
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5928 TGCCCGCCTCGGTCTCTCAAAGTGTTGGGATTACAGGCGTGAGCCACTGCACCCGGCCTA 5869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1740 GAATCCAAATCAGTGTGTTTGACCACTGTCACTTGAGAACCACAGTGTGACAAGTGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1860 CAGGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCA 1919
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5654 AATAC-AAAAATTAGCCAGGCCTGGTGCCGCGTGTTAATCCCAGCTACTCAGAAGC 5596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----ACCACCAACAACAAAAGAACATGGATAGGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 43950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 303; DB 4; Length 43
Pred. No. 5.6e-65;
0; Mismatches 200; Indels
                                                           31309 AAAAAAAAAAAAAAAAAAAAAGGAACCAACTA 31278
2142 AAAAACAAAAACAAAAGAATTAAGCAAATTA 2173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7.78;
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Best Local Similarity 68.23
Matches 492; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Homo sapiens
                                                                                                                                                                           RESULT 15
US-09-735-934A-3/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43950
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Sequence 15, Appl
Sequence 24494, A
Sequence 24494, A
Sequence 814, App
Sequence 11, Appli
Sequence 1569, Ap
Sequence 1584, Ap
Sequence 1584, Ap
Sequence 52, Appli
Sequence 52, Appl
Sequence 7810, Ap
Sequence 7810, Ap
                                                                                                                                                                                                                                                 (without alignments)
7909.918 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                      1 aggaattcatccatttaaat......ggacacggtcacccgttgc 3910
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1: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US06_PUBGOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/US06_PUBGOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/US08_PUBGOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/US08_PUBGOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/US08_PUBGOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US08_PUBGOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/US08_PUBGOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US09_PUBCOMB.seq:*
11: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
12: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
13: /cgn2_6/ptodata/1/pubpna/US09_NEW_PUB.seq:*
14: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
15: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
16: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
17: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
18: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
19: /cgn2_6/ptodata/1/pubpna/US108_PUBCOMB.seq:*
                                                                                                                                                                                                     May 13, 2004, 09:06:53 ; Search time 2243.23 Seconds
GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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US-10-087-192-10

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US-10-087-192-814

US-10-087-192-814

US-10-087-192-81

US-10-017-161-1569

US-10-087-192-4

US-10-087-192-4

US-10-087-192-4

US-10-087-192-6

US-10-087-192-5

US-10-087-192-1584

US-10-087-192-5

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US-10-181-875-10

US-09-764-891-7809

US-09-764-891-7809
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 1.0
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34, 7, 7 1, 1 322, INFOR	Sequence 31, Appl Sequence 1618, Ap Sequence 1168, Ap Sequence 2429, Ap	Sequence Sequence Sequence	Sequence Sequence Sequence	Sequence Sequence Sequence	Sequence 3244, Ap Sequence 2246, Ap Sequence 904, App Sequence 2429, Ap	Sequence 2069, Ap Sequence 154, App Sequence 844, App Sequence 787, App	Sequence 1945, Ap Sequence 1945, Ap Sequence 1945, Ap Sequence 1943, Ap Sequence 1943, Ap	4
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Best Local Similarity 100.0%; Pred. No. 0;
Matches 3910; Conservative C; Mismatches 0; Indels 0;
          Sequence 15, Application US/10016725
; Publication No. US20020151018A1
; GENERAL INFORMATION:
; APPLICANT: Prouty, Stephen
; APPLICANT: Stenn, Kurt
; TITLE OF INVENTION: Stearyl-CoA Desaturase Promoter
; FILE REFERENCE: JG-2065
; CURRENT APPLICATION NUMBER: US/10/016,725
; CURRENT FILING DATE: 2002-06-10
; NUMBER OF SEQ ID NOS: 22
; SOFTIABAE: Patentin Version 3.1
; FEARLY OF SEQ ID NOS: 22
; SEQ ID NO 15
; FEARLY OF SEQ ID NO 15
                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Homo sapiens
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1816	RESULT 2 US-10-087-192-10 is generace 10, Application US/10087192 subjication No. US20020182586A1 GENERAL INFORMATION: APPLICANT: Morris, David W. APPLICANT: Morris, David W. TITLE OF INVENTION: CANCER FILE REFERENCE: 529452000122 CURRENT APPLICATION NUMBER: US/10/087,192 CURRENT APPLICATION NUMBER: US/09/1747,377 PRIOR FILING DATE: 2000-10-22 PRIOR FILING DATE: 2000-10-22 PRIOR FILING DATE: 2001-03-02 NUMBER OF SEQ ID NOS: 2059 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 10 LEMCTH: 37698 TYPE: DNA CORANISM: Homo sapiens US-10-087-192-10	Query Match         99.3%;         Score 3881.8;         DB 13;         Length 37698;           Best Local Similarity         99.9%;         Pred. No. 0;         2;         Indels 2;         Gaps         2;           Qy         6280         GAATTCATCCATTTAAATCATATTAATGGTTTTAGTAATTCACAGGTTGGCAT         639           Qy         63 CCATCACAATTTAAAACAGTTTTATTAAATCATAATATCCTTAG         122           Db         6340         CCATCACAATCATTTATTAATACTCCCAAAAATAAACCTTAGGTTCCTTAG           Qy         6340         CCATCACAATCCTTTATTATTATTACTCCCAAAATAAACCTGGATTCCTTAG           Qy         123         CCATCACCCCCAACATCCTCCCACCCTGGGCATCCTTAGG           Qy         123         CCATCACCCCCAACATCCTCCCATCCCTTCCAAGCCACCCAACTCTTTAGG           Db         6400         CCATCACCCCCCAACATCCTCCAACATCCTTCCAAGCCTGGGCAACCACATCTACTT         182
2401 AGTCTACCTCCCAGGAAATCCCAGGTGCTTGTCTTCCTGGGAAGTGAATCATTGGCGCAG 2460 2461 AGTCTACCTCCCAGGAAATCCCAGGTGCTTGTCTTCCTGGGAAGTGAATCATTGGCGCAG 2460 2461 CACTCCGTATTTTCTCCTTCCAGGGAAGGATCCTAGGGCAGTATTGGGAAAGAC 2520 2461 CACTCCGTATTTTCTCCTTCCCAGGGAAGGATCCTAGGGCAGTATTTGGGAAAGAC 2520 2521 TGGGCATGGAAGGACACCGGGTGAATGCTTAGGCAGTTCTGAGGCTCTATGGTAA 2580 2521 TGGGCATGGAAGGACACCGGGTGAATGCATAGCTTCCTGGTTCTGAGTCATGGTAA 2580 2521 TGGGCATGGAAGACCGGGTGAATGCATAGCTTCCTGGTTCTGAGTCATGGTAA 2580 2521 TGGGCATGGAAGACGGGAAAAGATGCATAGCCTGCTTCTGAGTCTCATGGTAA 2580 2581 GGCTCCTACAGACACGGAAAAAGATGCATAGCCTGCTGGTTCTGAGTCATAGGTT 2640 2581 GGCTCCTACAGACACGGAAAAAGATGCATAGCATAGAAAAAAAA	2881 AATACCTGCCAGCTATTCTTATTCCACATCCAAGCCCTTTCGCCTGCTGGCTG	41 1 41 1 61 0 61 0 61 0 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1

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US-102/102/1032/224934/C

Publication No. US2020198371A1

GENERAL INFORMATION:

APPLICANT: Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single No.

TITLE OF INVENTION: Polymorphisms in the Human Genome
FILE REFERENCE: 108927.129

CURRENT TAILING DATE: 2000-04-20

FRIOR PAPLICATION NUMBER: US 60/198,676

PRIOR APPLICATION NUMBER: US 60/198,676

PRIOR PLING DATE: 2000-04-20

PRIOR PLING DATE: 2000-04-20

PRIOR PLING DATE: 2000-03-29

PRIOR FILING DATE: 2000-02-24

PRIOR PLING DATE: 2000-02-24

PRIOR PLING DATE: 1099-11-23

PRIOR FILING DATE: 1999-11-23

PRIOR FILING DATE: 1999-11-23

PRIOR FILING DATE: 1999-08-28

PRIOR FILING DATE: 1999-08-28

PRIOR FILING DATE: 1999-08-09

PRIOR FILING DATE: 1999-08-09

PRIOR FILING DATE: 1999-08-09

PRIOR FILING DATE: 1999-08-09

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SOFTWARE: PSECE FOR WINDOWS VERSION 4.0

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GRENEAL INFORMATION:

APPLICANT:
Wang, David G.

TITLE OF INVENTION: Identification and Mapping of Single Nucleotide

TITLE OF INVENTION: Polymorphisms in the Human Genome

FILE REFERENCE: 108927.129

CURRENT APPLICATION NUMBER: US/10/027,632

CURRENT FILING DATE: 2000-04-30

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PRIOR APPLICATION NUMBER: US 60/199,676

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PRIOR FILING DATE: 2000-03-29

PRIOR FILING DATE: 1090-11-23

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LENGTH: 631

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; Sequence 24494, Application US/10027632
; Publication No. US20030204075A9
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Sequence 814, Application US/10087192
Fublication No. US20020182586A1
GENERAL INFORMATION:
APPLICANT: MORIS, David W.
TITLE OF INVENTION: CANCER
TITLE OF INVENTION: CANCER
FILE REFERENCE: 5.2945200122
CURRENT APPLICATION NUMBER: US/10/087,192
CURRENT APPLICATION NUMBER: US/147,377
PRIOR PAPILCATION NUMBER: US 09/747,377
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-32
SUFFWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 814
LENGTH: 59725
TYPE: DNA
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       DB 16;
Score 630.6; DB 16
Pred. No. 2.1e-158;
1; Mismatches 0;
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       16.1%;
99.8%;
       Query Match 16.1
Best Local Similarity 99.8
Matches 630; Conservative
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           FEATURE:

NAME/KEY: misc feature

LOCATION: (1)...(59725)

J. OTHER INFORMATION: n = A,T,C or US-10-087-192-814
                                                                                             Best Local Similarity 56.7
Matches 1107; Conservative
ORGANISM: Homo sapiens
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ORGANISM: Homo sapiens
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NAME/KEY: source
LOCATION: (1)..(9631)
CURRENT FILING DATE:
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Matches 1078; Conserv
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        APPLICANT: BIOWILLE, ALLEGAN, ALLEGAN, APPLICANT: BIOWILLE, ALLEGAN, Makoto
APPLICANT: Miyazaki, Makoto
APPLICANT: Gray-Keller, Mank P.
APPLICANT: Gray-Keller, Man D.
APPLICANT: Gray-Keller, Man D.
TITLE OF INVENTION: Methods and Compositions Using Stearcyl-CoA Desaturase
TITLE OF INVENTION: Lo Identify Triglyceride Reducing Therapeutic Agents
FILE REFERENCE: 760050-7
CURRENT APPLICATION: NUMBER: US, 00/192,468B
CURRENT FILING DATE: 2000-02-24
PRIOR FILING DATE: 2000-02-24
PRIOR FILING DATE: 2000-07-31
PRIOR FILING DATE: 2000-07-31
PRIOR FILING DATE: 2000-12-15
NUMBER OF SEQ ID NOS: 6
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 617
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Publication No. US20030143668A1
GENERAL INFORMATION:
APPLICANT: SUWA, MAKIKO
APPLICANT: ASAI, KIYOSHI
APPLICANT: ASAI, KIYOSHI
APPLICANT: ABURATANI, HROYUKI
TITLE OF INVENTION: NOVEL G PROTEIN-COUPLED RECEPTORS
FILE REPRENCE: 064335/0152
CURRENT APPLICATION NUMBER: US/10/017,161
                                                                                                                                                                                                                                                                                                                                                                                                    Score 450.4; DB 10
Pred. No. 5.3e-110;
0; Mismatches 1;
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Best Local Similarity 99.8%;
Matches 451; Conservative 0
   Brownlie, Alison J.
                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Homo sapiens
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US-10-017-161-1569
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: modified base
| LOCATION: (9233)...[9332)
| OTHER INFORMATION: a, t, c, g, unknown or other
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FEATURE:
NAME/KEY: modified base
LCCATION: (3802)..[3701)
OTHER INFORMATION: a, t, c, g)
PRIOR APPLICATION NUMBER: JP 2
PRIOR FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 2430
SOFTWARE: Patentin Ver: 2.1
SEQ ID NO 1569
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596 481 716

QY         1996         TAAGTGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGGTCAGGCAGATTT         2055           Db         1864         CGGGAGTGGTGGCCTTTAGTCCCAGCTACTCGGCAGGAGCAGGAGAATGG         1923           QY         2056         CTTGAACCCGGGAGGCAGGTGAAGCGAGATCACACTCCAGCCTG         2115           Db         1924         TATGAACCCGGGAGGCTGAGATCAGCTGAGATTGCGCCACTGCACTCCAGCCTG         1983           QY         2116         GGGGAGGGCTTCCTCTCAAAAAAAAAAAAAAAAA         2156           TH         HIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	RESULT 8 US-10-087-192-4/c is Sequence 4, Application US/10087192 is Publication No. US20020182586A1 is GENERAL INFORMATION: APPLICANT: MOTIFIS, David W. APPLICANT: MOTIFIS, David W. TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR TITLE OF INVENTION NUMBER: US/10/087,192 CURRENT APPLICATION NUMBER: US 09/747,377 FRIOR APPLICATION NUMBER: US 09/747,377 FRIOR APPLICATION NUMBER: US 09/747,377 FRIOR PILING DATE: 2000-12-22 FRIOR PILING DATE: 2000-12-22 FRIOR PILING DATE: 2001-13-02 NUMBER OF SEQ ID MOS: 2059 SOFTWARE: FastSEQ for Windows Version 4.0 IENGTH: 23618 TYPE: DNA COFTWARE: Misc_feature SEATURE: NAME/KEY: misc_feature SEATURE: COTHER INFORMATION: n = A,T,C or G	Destroach 1924  Ouery Match  Best Local Similarity 69.3%; Score 360.4; DB 13; Length 23618;  Best Local Similarity 69.3%; Pred. No. 9.4e-85;  Matches 503; Conservative 0; Mismatches 221; Indels 2; Gaps 2;  Matches 503; Conservative 0; Mismatches 221; Indels 2; Gaps 2;  Matches 503; Conservative 0; Mismatches 221; Indels 2; Gaps 2;  1441 TTTTTTTTTTTTTTGAGAAAGAGTCTGCTTTCACCCGGGTGGAGGGCAGTGCTG 1500  Db 10943 CGAGTCGGCTCACTGCACTTCACTCTCACCCCGGCTGGAATGCAGTGCT 1560  Db 10943 CGAGTAGCTGGAACTTCACTTCACTCACTCACAGAATTCTCCTCCTCAGCT 1560  Db 10983 CCCGAGTAGCTGGAACTTCACTTTGTAGTCATTTTTGTATTTTTAG 1620  Up 1621 TAGAGATGGAACTACAGTGACTACAGCAATTTTTTGTATTTTTAG 1620  Up 1622 TAGAGACGGGACTACAGGCACAGCACACACTCTCGAACTTTTTTTT
Db 753 TGCCTAGCTAATTTTTAAATTTTTTTTGTAGGATCTCACTATGTTGCCTA 808  Oy 945 GGCTGTATTTTATTGTTGAGCAAGGTCTCACTATGTTGCCTAGCATCCCCCACCTCCA 1004  Db 809 GGCTCGTCTTCAACTCCTGGGTTCAAGCAGTCCTTGCCTTG	1125 ATATGTTTTCATTTCTTTGTTGGGTTTATATCTAGGAGTGGAATTGCTGGATCCCGGGTAAT 1184  982 TTCTAGTTCTATTATTCATTTATTATTAGGTGGAATACTTCTATAAA 1029  1185 ATTTTGACAGGCAGAGTTTATTATTATTAGGTGGAAAATGAAGAGTTTAGAAAT 1244  1030 GAGAAACCTCCCCTTTTTTATTTTATTTTATTTTATATACATATTGGAAAT 1089  1245 CAGCAGAGGTGCAGGGGTTTTTCCCGAGTTTACCCAGTGTTAACATATTGGAAAT 1089  1245 CAGCAGAGAGTGCAGGGGTTTTTCCCCTTGTTTATTTTATTTTTATATACATATTGGAAAT 1089  1305 TTGATGAAAATTTTGTTCTTTCCCCTTGTTTACCAATTTCAGAAAT 1089  1305 TTGATGAAAATTTTGTTCTTTAATAGTGAGAAATTTCAGTAAAACTC 1208  1305 TTGATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GCCCAGGCTGGAGTGCAGTGCAATCTCAGCTAACCTCCGCCTCTAGGGTTC  AAGCAATTCTCCTGCTTCAGCTCCCAAGTAGCTGGAACTTCCCACCATGC  AAGTGATTTTTGTATTTTAGTAGAGTAG

	DD 15319 CT-TGTTGCCAAGCTGGAGTACAGTGGCGTAATAATAGCTCACTGCAGCTCC-CCTCC	Qy 821 TGGGCTCAAGCAATCCGCTGGCCTCAGCATCCTGAGTAGCTGGGACTACAGGCTTGTGTCCCTGAGTAGCTGGGACTACAGGCTTGTGTCCCTGAGTAGCTAGGAGCTAGTGTGCCCTGAGTAGCTAGAGAAAAAAAA	13280	Db 15200 ACCACGCTGTCTAATTTTTTGTATTTTAGTAGAGACAGGGTTTCACCCATGTTG  Qy 941 CTCAGGCTGTATTTTTATTGTTGAGACAAGGTCTCACTATGTTGCCATGATCCCCCCACCACGATGATCTTTAGTTGAGACAAGGTCTCACTATGTTGCCATGATCCCCCCACCACGATGATTTTTATTGTTGAACAAGGTCTCACTATGTTGCCATGATCACCCACGATGATTTTTATTGTTGAACAAGGTCTCACTATGTTGCCCATGATTTTTTTT	Db 15145 GGCAAGCTCTCTAACTCCTGACCTCAGGTGATCGGCTGCCTGCCTGACCTCAGGTGATCAGGTTGCCTTGACAGACATTAGGTTGACAGACATTAGGTTGACAGACA	15101	Qy 1061 TTTCCACTTTTTGACCATTATGAATAATACTCCAGTGAATATTCATGTATACATTTGTGT	OY 1121 GGGCATATGTTTCGTTGGGTTTATATGTAGGAGTGGAATTGCTGGATCCCGGGG	QY 1181 TAATATTTGACAGGCAGGGAAGAAGAAAAACTTGGGAAAAATGAAGCATGTTTAG Db 14923 TGACATTTTAATGGGGAAGAGATGGTGGTGCTGGAGTCATCCAAGGGACACGTCCTGATG	OY 1241 AAATCAGCAAGAGTGCAGGGGTTTTTGGGAGTTTTATTTA	QY 1301 CAGTTTGARGAGATACAAGTTATACTAAGTGAGAAGTGAGAATTAAGGCTGGAATAGGG Db 14803 CTGTGCCAAGAGCCCTGCAGTT	QY 1361 CGTTCAGAGTAAAATCATGAAGCACTTTGAATACCAAAATTAAGGAGCTTGGCTGTAAAC Db 14781CAGTGGGTGGGACCTGACACTCCTCTTATAGGAAGCCC	Qy 1421 AAAATAAAAATCACAATTTTTTTTTTTTTTTGAGAAGACTCTTGCTCTTTCACC	Qy 1481 CTGGCTGGAGGGCAGTGGTGATCTCAGCTCACTGCAACTTTGGCCTCCGGGTTCAAG  14681 CAGGCTGGAATGGCATGATCTCGGCTCACTGCAACCTCTGGGTTCAAG	Oy 1541 CAAITCICCIGCITCAGCCICCCAAGTAGCTGGGACTACAGGCACTICCCACCATGCCCA  Db 14621 CGAITCITCIGCCICAGCCICCGAGIAGCIGGGAGIACAGGCACCCGCCACCACTCTG	Qy 1601 GCTGATTTTGTATTTTAGTAGATGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAA 	1661	Db 14441 CTCTTGCTATTCTTGGCCTTGGAGTGAAACCTGAGTGTTGGTTG
1860 CAGGCGIGGIGGCICAIGCCIGIAAICCCAGCACIIIGGGAGGCCAAGGCAIGIGGAICA 1919	10583 CAGGCATGGCGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCAGGC		1980 ANTACAAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCAGGTACTTGGGAGGG 2039 [	2040 TGAGGCAGGAGARTTCTTGAACCCGGGAGGCAGAGGTTGCAGTGAAGCGAGATCACACC 2099 10404 TGAGGCAGGAGAATCGCTTGTACCTGGAAGGCAGAAGGTTGCAGTGAGCCGACACTGAACC 10345	2100 ACTGCACTCCAGCCTGGGGAGGAGCGAGACTTCCTCTCAAAAAAAA	A110-A117A 2165		RESULT 9 US-10-240-425-1584/c 'Sequence 1584, Application US/10240425 'Publication No. US20040033502A1	ENERAL INFORMATION: APPLICANT: Williams, Amanda APPLICANT: Boland, Joseph F. APPLICANT: Lord, Redinald V.	APPLICANT: Alvarez, Chris APPLICANT: Wetzel, Jon C. APPLICANT: Scherf, Uwe APPLICANT: Sockley, Joseph G.	TITLE OF INVENTION: Gene Expression Profiles in Esophageal Tissue FILE REFERENCE: 44921-5026 CURRENT APPLICATION NUMBER: US/10/240,425 CURRENT FILING DATE: 2002-09-30	PRIOR APPLICATION NUMBER: PCT/US01/09847 PRIOR FILING DATE: 2001-03-28 PRIOR APPLICATION NUMBER: US 60/193,446 PRIOR FILING DATE: 2000-03-31	NUMBER OF SEQ ID NOS: 1589 SOFTWARE: Patentin Ver. 2.1 SEQ ID NO 1584 LENGTH: 36296	TYPE: DNA ORGANISM: Homo sapiens FEBYUNE: OTHER INFORMATION: Genbank Accession No. US20040033502A1 Z82180	.425-1584 ttch al Similarity 57.2%; Pred. No. 8.4e-83;	66; Conservat  GCTAATTTTTT	TGTTTTGAGTAGGGGCCCTTTGTTACCCAGGCTGGAGGGCAGTGGCATGGTGACAGC	642 TGAGCAGCCTTGACTTCCTGGGCTCAAGTGATCCTCCTGCCTCAGCTCCTAAGTAGCTG 701

ACACADACA 14322 Db 4589 GTCCACCATGCCCACCTAATTTTTTTTTTTGAGATGGGGTC	1884 QY 568	TGTAA 14262 Db 4629		Qy 686 GCTCCCAAGTAGGAGCTACAAAACAGGTGCCACAGTGCCTGGTGATTTTTTTCCAAGTGGCTGGTGGGTG	Qy 746 TTGAAACAGGGTATCACTGTTGCCCAGGTGGAGTACAGGTGGCGTAATAATAG	AGCCTGGGG 2118         QY         801 CTCACTGCAGCCTCCCCTCCTCGGGCTCAAGCAATCCGCTGGCCTCAGCATCCGGAGTAGCTCAGGTAAGCTCAGGTAAGCTCAGGTAATCTTCCCAGGCCTCACAGAAGTGCAGGCCTCACAAAGTGCAGAGCTCACCTGAGCTCACCTGGGCCTCACAAAAGTGCAGAAGTGCAGAAGTGCAGAAGTGCAGAAGTGCAAAAAGTGCAGAAAAAGTGCAAAAAAAA	2170 Qy 861 IGGGACTACAGGCTAGTGCCACCAGGCCCAGGTTTTAAAAAATGATTTTTGGTATA 13972 Db 4871 CAGGATTGCAGGTTTGAGCCACCGCACCTGACTTTTGTATTTTTTTT	Qy 921 GAGGAGGTCTTGCTATGTTGCTCAGGCTGTATTTTATTGTTGAGACAGGTCTCACTAT	Qy 981 GTTGCCATGATCCCCCCACCTCCCAAAGTGCTCATCTTATCTGTTCATTAGTCA  Db 4991 TCTTTTTTTCTGAAATGAAGTGGAGTTTAGCTCTGGAGTGCATGATGATGGCTCATTGGAGTGCTTTGGAGTGCTTTAGCTCATGATCTTGGAGTGCTTTTTTGGAGTGCTCATGATCTTTTTTGGAGTTTTAGCTCTTTGGAGTGGAGTGATCTTGGATCAGATCTTTTTTTT	OY 1041 GITGACAGACATITAGGITGTITCCACTITITGACCATTAIGAATAATACTCCAGTGAATA D D 5051 CIGCAACCTCTGCCTGGGTTCAAGCAATTCTCCTGCCTCATCCTTCCAAGTAG	Qy 1101 ATTCATGTARCATTTGTGTGGGGATATGTTTTCATTTCTGTTGGGTTTATATCTAGGAGGGGGGGG	Oy 1161 TGGAATTGCTGGATCCCGGGTAATATTTTGACAGGCAGAGTTCAGGGGAAGAA  DD 5167 GGCTTCATCATATTGGCCAGAATGGTCTTGAACTCCTGACCTCAGGTGATCCGCCCATCT	Qy 1214 AAACTTGGGAAAATGAAGCATGTTTAGAAATCAGCAAGAGTGCAGGGGTTTTTTGGAAGTT	Qy 1274 TTATTTTATATTCTGTTGACAAATGTGCAGTTTGATGAAGATACAAGTTATACTAAG Db 5287 TCTTTTTTTTTTTTAGACAGGTTCGCCTTGTCACCAGACTGGAGTGCAGGGG		5    5    5    5    5    5    5    5	CAAA	SCACA 
aacagagaaacctgctgctcacatgcatatatggacacacac	GGCCAGGCGTGGTGGCTCATGCC		CCCASCACTITIGGGAGGCAAGGCATGTGGATCACCTGAGGTCAGGAGTTCAAAACCAG	CTGGCCAACATGGTGAAACCCGTCTCTACTAAAAATACAAAAAATTAGGTAAG 	TGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGGTGAGGCAGGAGAAATTTCTTGAACCC	GGGAGGCAGAGGTTGCAGTGAAGCGAGATCACACCACTGCACTCCAGCC 	gagagagcgagacttcctctcaaaaaacaaaaaacaaaagaattaagcaaa 		Sequence 5.4, Application US/1108/192 Publication No. US20020182586A1 GENERAL INFORMATION: APPLICANT: Morris, David W.	APPLICANT: Engelhard, Eric K. TITLE OF INVENTION: OVOEL COMPOSITIONS AND METHODS FOR FITLE OF INVENTION: CANCER. FILE REFERENCE: 529452000122	CURRENT APPLICATION NUMBER: US 10/087,192 CURRENT APPLICATION NUMBER: US 09/747,377 PRIOR FILING DATE: 2000-12-22	LICATION NUMBER: US 09/798,586 INC DATE: 2001-03-02 SEQ ID NOS: 2059 PastSEQ for Windows Version 4.0			မ	MIBHACCIES (10)	CTCACTCTGTCACCCCAGGCTGGGGGCAGGGGGCACAATCATAGCTCATGATAGCCTGAAACCCTGTAACCTGTAACCTGTAACCTGTAACCTGTAACCTGTAACCTGTAACCTGTAACCTGTAACCTGTAACACTGCAACAACAACAACAACAACAACAACAACAACAACAACAA	CTCCTGGGCTCAAGTGATCCTACCTCCAGAGTAGCTAGGACTACAGC  CTCCTGGGCTCAAGTGATCCTACTACCTCCAGAGTAGCTAGGACTACAGC

NAME/KEY: CDS	Query Match 8.9%; Score 349.8; DB 16; Length 12394; Best Local Similarity 55.2%; Pred. No. 4.3e-82; Matches 1016; Conservative 0; Mismatches 742; Indels 81; Gaps 14;	OY 370 TATTATTAGAGATTCTCACTCTGTCACCCAGGCTGGAGTGCACAGACACATAA 429	A30 GCTCACTGTAACCTCTGGGCTCAAGTGATCCTACTACTACCTCAGCCTCCAGAGTA 489  1	OY 490 GCTAGGACTACAGGCACACACACAGCCATACCTGGCTAATTTTTTTT	0y 550 AIGHATCAITHCITHTIGHCCATGTTGTTTGAACACGACTCTAACTTTTTGAACACGACTCTAACTTTTTGAACACGACTCTTGACTCTCAACTCTAACTTAATA 609  0y 610 CCCAGGCTGAACACGCTGACCTGACTCCAACTCCTGACCTCAACTAAT 3841  0b 3842 CCGCCCCACCTCGACCTGCTGACTGACTTCCTGACCTCTCAGCTCAACTAATACACTCAACTCTAACTCCTGACCTCAACTAATACACACAC
QY         1631 ATTTCACTTGTTGGCCAAGCTGGTCTCAAAC	1960 GAAACCCGTCTCTACTAAAATACAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTA 6007 GAAACCCGTGTCTACTAAAATAC-AAAATTAGCCAGGCATGGTGTGCGCCCTGTA	OY 2020 ATCCOAGCTACTTGGAGGGTGAGGCAGAGAATTTCTTGAACCGGGAGGCAGAGGTTG 2079	OY 2080 CAGTGAAGCGAGATCACACTGCACTCCAGCCTGGGGGAGAGAGA	Oy 2140 aaaaaaacaaaaacaaagaattaagcaaattagacat 2178 	RESULT 11 US-10-181-875-10 Sequence 10, Application US/10181875 Publication No. US20030216333A1 Sequence 10, Supplication US/10181875 Publication No. US20030216333A1 GENERAL INFORMATION: APPLICANT: Isia Pharmaceuticale, Inc. APPLICANT: Robert McKay APPLICANT: Mobert McKay APPLICANT: APPLICANTON: AUTISINSE MODULATION OF GLYCOGEN SYNTHASE KINASE 3 ALPHA EXPRESSI TITLE OF INVENTION: ANY SERVE MODULATION OF GLYCOGEN SYNTHASE KINASE 3 ALPHA EXPRESSI CURRENT APPLICATION NUMBER: US/10/181,875 CURRENT APPLICATION NUMBER: 09/488,856 FILE REFERENCE: RISP-03-6 CURRENT APPLICATION NUMBER: 09/488,856 FILE REFERENCE: 2002-01-21 FRATOR APPLICANTON NUMBER: 09/488,856 MUMBER OF SEQ ID NOS: 89 SEQ ID NO 10 FENGEN: AND APPLICANTON SEQ ID NOS: 89 SEQ ID NO 10 CORGANISM: Homo sapiens FEATURE: NAME/KEY: CDS LOCATION: (115)(397) FEATURE: NAME/KEY: CDS LOCATION: (1539)(2625) FEATURE: NAME/KEY: CDS LOCATION: (5639)(5722)

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Query Match
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CRGANISM: Homo sapiens
US-09-764-891-7810
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1020 ATCTTATCTGTTCATTAGTCAGTTGACAGTTTTAGGTTGTTTCCACTTTTTGACCATT 1079
                            CTGCAACCTCTGCCTCCTGGGTTCAAGCGCTGCAACCTCTGCCTCGTGGGTTCAAGCAAT 4314
                                                         1080 ATGAATAATACTCCAGTGAATATTCATGTATTACATTTGTGTGGGGCATATGTTTTCATTTC 1139
                                                                                     TCTTGTACCTCATCCACCTGAGTAGTTGGAATCACAGGCGTGCGCCACCATGCCCAGGTA 4374
                                                                                                                  TGTTGGGTTTATATCTAGGAGTGGAATTGCTGGATCCCGGGTAATATTTTGACAGGCAGA 1199
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Publication No. US20030077808A1
GENERAL INFORMATION:
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies FILE REFERENCE: PCOOR
CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
Prior application data removed - consult PALM or file wrappe NUMBER OF SEC 1D NOS: 10231
SOFTWARE: PatentIn Ver. 2.0
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Sequence 2278, Application US/09880107; Patent No. US20020142981A1; GENERAL INFORMATION:
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Best Local Similarity 57.53
Matches 848; Conservative
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SOFTWARE: Patentin Ver. 2.1
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                                                                                                                                                                                                                         Sequence 7809, Application US/09764891
; Bequence 7809, Application US/09764891
; GENERAL INFORMATION:
; GENERAL INFORMATION:
; TILLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
; TILLE REFERENCE: PC006
; CURRENT FILING DATE: 2001-01-7
; Prior application data removed - consult PALM or file wrapper; NUMBER OF SEQ ID NOS: 10231
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 7809
LENGTH: 29163
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                                                                                                       2161 ATTAAGCAAATTAGACA 2177
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, OTHER INFORMATION: Genbank Accession No. US20020142981A1 M17262
US-09-880-107-2278
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APPLICANT: Wockley, Joseph G.
APPLICANT: Scherf, Uwe
APPLICANT: Scherf, Uwe
APPLICANT: Scherf, Uwe
APPLICANT: Gene Logic, Inc.
TITLE OF INVENTION: Gene Expression Profiles in Liver Cancer;
FILE REPERRNCE: 44921-5028-WO
CURRENT APPLICATION NUMBER: US/09/880,107
CURRENT FILING DATE: 2001-06-14
PRIOR APPLICATION NUMBER: US 60/211,379
PRIOR APPLICATION NUMBER: US 60/217,054
PRIOR APPLICATION NUMBER: US 60/237,054
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57.5%; Pred. No. 5.5e-80;
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APPLICANT: McCarthy, Jeanette
TITLE OF INVENTION: Methods and Compositions for Identifying
TITLE OF INVENTION: Risk Factors for Abnormal Lipid Levels and the Diseases
TITLE OF INVENTION: and Disorders Associated Therewith
FILE REFERENCE: MMI-011
CURRENT APPLICATION NUMBER: US/10/235,192A
CURRENT FILING DATE: 2002-09-04
NUMBER OF SEQ ID NOS: 49
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 34
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Pred. No. 5.5e-80;
0; Mismatches 552;
                                                    Sequence 34, Application US/10235192A
Publication No. US20040043389A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 8.8%;
Best Local Similarity 57.5%;
Matches 848; Conservative
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US-10-235-192A-34
RESULT 15
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15.9%; Score 620.4; DB 12
Best Local Similarity 99.5%; Pred. No. 8.8e-86;
Matches 643; Conservative 0; Mismatches 1;
                                                   organism="Homo sapiens"
                                                                           /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5743936"
/tissue_type="medulla"
location/Qualifiers
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B1559696 579 bp mRNA linear EST 05-SEP-2001 603252566F1 NIH\_MGC\_97 Homo sapiens cDNA clone IMAGE:5294921 5',

BISS9696 LOCUS DEFINITION

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                                                                                                                                                                                                                                                                                                                Email: cgapbs-remail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
Tobh Jubrary Preparation: Michael J. Brownstein (NHGRI), Shiraki
Chosh Jubrary Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Close distribution: MGC close distribution information can be
found through the I.M.A.G.E. Consortium/LLML at:
http://image.llnl.gov
Plate: LLAM11746 row: c column: 18
                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.

1. (Dases 1 to 579)

NIH-MGC http://mgc.nci.nih.gov/.

National institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: 576.
Location/Qualifiers
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/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="mRNA"
/db_xref="taxon:9606"
BI559696
BI559696.1 GI:15447010
                                                                            Homo sapiens (human)
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Klausner, R.D., Celluglui, P.A., Veruse, J.H., Derge, J.C.,
Klausner, R.D., Colling, F.S., Wagner, L., Shemmen, C.M., Schuler, G.D.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopking, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Haieh, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheefz, T.E., Brownstein, M.J., Urdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Morkernan, K.J., Malek, J.A., Gunarane, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Vilalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, B., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Shevchenko, Y.
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Generation and initial analysis of more than 15,000 full-length
human and mouse cobnA sequences
Drosser,
Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Homo sapiens sialophorin (gpL115, leukosialin, CD43), mRNA (cDNA
clone IMAGE:5094058), with apparent retained intron.
EC035510
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                                                                                                                                                                                                            654 AACATAGTAAAACCCCATCTCTACAAAAAATACAAAATTAGCAGGGCATGGAGGCATG
                                                                                                                                                                                                                                                                                              2012 TGCCTGTAATCCCAGCTACTTGGGAGGGTGAGGCAGGAGAATTTCTTGAACCCGGGAGGC
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Parayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
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Homo sapiens
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                     CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov/
Rkhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karling,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.U., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            834 AAATGTACAAAAATATCCATCCTTACTGAGCTGATTTATATTTGTTTTAAATTCTTTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 774 GATTCAACTITTAAAAATACATTAGGCCAGGCATGATAGCTCACGCCTGTAATCCCAGC
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This clone has the following problem: retained intron.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:5582524"
/tissue type="Tresis, embryonal carcinoma"
/tissue lib="NIH MGC_92"
/lab_host="Dil0B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 7.5%; Score 294.2; DB 11; Best Local Similarity 64.5%; Pred. No. 8.4e-36; Matches 496; Conservative 0; Mismatches 253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Organism="Homo sapiens"
|mol_type="mRNA"
|db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1414 TGTAAACAAAATAATAAAAAATCACAATTTT
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2020 ATCCCAGCTACTTGGGAGGGTGAGGCAGGAGTTTCTTGAACCCGGGAGGCAGAGGTTG 2079
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 73 Row: i Column: 4 This clone has the following problem: retained intron. Location/Qualifiers
                                                                                                                                                                                                                                                  1373 chárichacccanarchicaccarricachicanachacanachanananachacanar 1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (15-OCT-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                       1313 ATCCCAGCTACTTGGCAGGCTGAGGCAGGAGAATCCCTTGAACCCAGGAGGTGGAGGTTG
                                                                                                                                                                      2080 CAGTGAAGCGAGATCACACCACTGCACTCCAGCCTGGGGGAGAGAGCGAGACTTCCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1500 GIGALCICAGCICACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCTGCTTCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTTTTTTTTTTTTTGAGAAGAGTCTTGCTCTT-TCACCCTGGCTGGAGGCAGTGGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-remail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
CDNA Library Preparation: Michael J. Brownstein (NHGRI) & Sh
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman, Anurad
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutele
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
1 (bases 1 to 2772)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="Brain, hippocampus"
/clone_lib="NIH MGC 95"
/lab_host="DH108"
/note="Vector: pBluescript"
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5263792"
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                                                                                                                                                                                                                                                                                                                                                                                                            1433 CAAAAAAAAAAAAAGGAGATA 1453
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
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                         Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B., Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R., Maduro, O.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W., Young, A., Zhang, L.-H. and Green, E.D.
                                                                                                                                                                                                                                                                                                                                                                                       Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LIANL at: http://image.llnl.gov Series: IRAL Plate: 39 Row: p Column: 13
This clone was selected for full length sequencing because it passed the following selection criteria: Similarity but not identity to protein
This clone has the following problem: retained intron.
Location/Qualifiers
1. 2076
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAATAATAAAAAATCACAATTTTTTTTTTTTTTTGAGAAAGAGTCTTGCTCTTTCACC 1480
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="IMAGE:5094058"
/tissue type="Lymph, Burkitt lymphoma"
/clone_lib="NH MGC_8"
Contact: nisc_mgc@nhgri.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
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/d_one="Iredacaling"
/dlone="Iredacaling"
/lab.hoft="DHIDB"
/lab.hoft="DHIDB"
/clone lib="WIH MGC 119"
/clone lib="WIH MGC 119"
/clone lib="WIH MGC 119"
/clone lib="WIH MGC 119"
/clone lib="Organ: brain; Vector: pCMV-SPORT6; Site l: NotI;
Site 2: EcoRV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dr primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NHE_MGC Library."
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Homo sapiens, Similar to hypothetical protein FL/20489, clone
IMAGE:5263792, mRNA.
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

    (bases 1 to 2772)

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Submitted (15-0CT-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCAGGACGAGGTGGCACCAAATTCCCTTCGGCCAATGACGAGCCGGAGTTTACAGAAGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
CDNA Library Preparation: Michael J. Brownstein (NHGRI) &
Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Institute for Systems Biology
thtp://www.systemsbiology.org
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 754;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.3%; Score 286; DB 12;
99.7%; Pred. No. 2.7e-34;
live 0; Mismatches 0;
                                /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
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KEYWORDS
SOURCE
ORGANISM
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AUTHORS
TITLE
JOURNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2364
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbe-remail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
Plate: LLAM11416 row: n column: 16
High quality sequence stop: 741.
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I (bases I to 754)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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TCCCAAGTAGCTGGGACTACAGGCACTTCCCACCATGCCCAGCTGATTTTTGTATTTTTA
                                                                                                      GTAGAGATGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACTTTTTGCTGTCATAATT
                                                                                                                                                 2573 GTATATTTGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCAGGTGAT
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Homo sapiens
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3672

Gaps

3732

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3792

3852

239

Shiraki

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Clone distribution: MGC clone distribution information can be found
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Series: IRAL Plate: 39 Row: p Column: 13
This clone was selected for full length sequencing because it
passed the following selection criteria: Similarity but not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               identity to protein
This clone has the following problem: retained intron.
          2758 AAAAAAAAAAAA 2772
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                                                       Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LIML at: http://image.llnl.gov Series: IRAK Plate: 73 Row: i Column: 4
This clone has the following problem: retained intron.
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Anup Madan, Jessica Fahey, Brin Helton, Mark Ketteman, Anura
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
                                                                                                                                                                                                                                                                                                                                                                                          Length 2772;
                                                                                                                                                                                                                                                                                                                                                                                                                                33;
                                                                                                                                                                                                                                                                                                                                                                                  7.2%; Score 283.4; DB 11; Length 66.1%; Pred. No. 3.1e-34; Live 0; Mismatches 216; Indels
                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5563792"
/tissue_type="Brain, hippocampus"
/clone_lib="NIH MGC_95"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                             /note="Vector: pBluescript"
                                                                                                                                                                                   organism="Homo sapiens"
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L'UABRES I LO. JULIA,

Strausberg, E. J., Feingold, E. A., Grouse, L. H., Derge, J. G.,

Klausher, R. D., Colling, F. S., Wagner, L., Shenmen, C. M., Schuler, G. D.,

Klausner, R. D., Colling, F. S., Wagner, L., Schaefer, C. K., Bhat, M. K.,

Hopkins, R. F., Jordan, H., Mooret, T., Max, S. I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A. A., Rubin, G. M., Hong, L.,

Staplecon, M., Soares, M. B., Bonaldo, M. F., Casavant, T. L.,

Scheetz, T. E., Brownstein, M. J., Usdin, T. B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S. S., Loquellano, N. A., Peters, G. J.,

Abramson, R. D., Mullahy, S. J., Bosak, S. A., McEwan, P. J.,

Morley, K. C., Hale, S., Garcia, A. M., Gay, L. J., Hulyk, S. W.,

Villalon, D. K., Muzny, D. M., Sodergren, E. J., Lu, X., Gibbs, R. A.,

Fahey, J., Helton, B., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Butfard, G. G., Blakesley, R. W., Touchman, J. W., Green, E. D.,

Butterfield, Y. S., Krzywinsk, M. I., Sanika, U., Smailus, D. E.,

Schnerch, A., Schein, J. E., Jones, S. J. and Marra, M. A.

Generation and initial analysis of more than 15,000 full-length
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Contact: MGC help desk

Email: capabe.refmail.inh.gov

Tissue Procurement: Louis M. Staudt, M.D., Ph.D.

CDNA Library Preparation: Rubin Laboratory

CDNA Library Preparation: Rubin Laboratory

CDNA Library Preparation: Rubin Laboratory

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing Dy: National Institutes of Health Intramural

Sequencing Center (NISC),

Maryland;

Web site: http://www.nisc.nih.gov/

Gaithersburg, Maryland;

Web site: http://www.nisc.nih.gov/

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Contact: N. Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B.,

Blakealey, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S.,

Dietrich, N.L., Granie, S. Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karling, E., Kwong, P., Laric, P., Legaspi, R.,

Maduro, Q.L., Maskerli, B., Mastrian, S.D., McCloskey, J.C.,

McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W.,

Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L.,

Young, A., Zhang, L.-H. and Green, E.D.
BC035510
2076 bp mRNA linear HTC 19-NOV-2003
Homo sapiens sialophorin (gpL115, leukosialin, CD43), mRNA (cDNA
clone_IMAGE:5094058), with apparent retained intron.
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                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Butele
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 2076)
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Strausberg, R.
Direct Submission
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BU175345
LOCUS BU175345
TA9 bp mRNA linear BST 04-SEP-2002
DEFINITION AGENCOURT_7936105 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6011997
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                                                                                                                                                                                                                                                                                                                                                        DB 11; Length 2076;
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                       /clone="INAGE:5094058"
/tissue type="Lymph, Burkitt lymphoma"
/clone_lib="NIH MGC 8"
/lab host="DH108-R"
/note="Vector: pOTB7"
                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 1.3e-32;
0; Mismatches 206;
                                                                                                                                                                                                                                                                                                                                                     Score 273.4;
                                                       organism="Homo sapiens"
                                                                                      /mol_type="mRNA"
/db_xref="taxon:9606"
      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 67.4%;
Matches 487; Conservative 0
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                                                                                          Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Butheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="embryonal carcinoma, cell line"
/lab host="DB10B (phage-resistant)"
/clone_lib="NIH MGC phage-resistant)"
/note="Organ: testis; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sal1; Cloned unidirectionally; oligo-dT_primed.
Average insert size_2: Shb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
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                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM13202 row: i column: 22
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                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence stop: 530.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:9606"
BU175345.1 GI:22689329
                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov Series: IRAK Plate: 79 Row: d Column: 15
This clone was Balected for full length sequencing because it passed the following selection criteria: Similarity but not identity to protein
This clone has the following problem: retained intron.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4;
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Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B., Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gugan, Y., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, B., Kwong, P., Laric, P., Legaspi, R., Maduro, Q.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W., Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L., Young, A., Zhang, L.-H. and Green, E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1620 GTAGAGATGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACTTTTTGCTGTCATAATT 1679
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      746
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         687 CAATCCACCCCCCCCCCCCAAAGGGCTGGGATTACAGGCGTGAGCTATCATGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1800 CCTCAGGAGTAGAGGTGATCTCTGCTCGAAAGAGAAAATAGAATGAAAATATTCTCCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1501 TGATCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCTGCTTCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1740 GAAICCAAAICAGIGIGITGGITIGACCACTGICACTIGAGAACCACAGIGIGACCAGGG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      511 GGATTACAGTTCACTCCAGCCTCAATCTCCTAGGCTCAAGCAATCCTCCCCATCTCAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 631 GTAGAGATGGGGTTTTACTATGTTCCCTAGGCTAATCTTGAAC----TCCTGAGCTCAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6.9%; Score 269.4; DB 11; Length 1910;
64.8%; Pred. No. 5.4e-32;
-ive 0; Mismatches 236; Indels 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .1910
/organism="Homo sapiens"
/mol type="mRNA"
/db xref="taxon:9606"
/clone="IMAGB:558554"
/tissue type="Testis, embryonal carcinoma"
/clone_lib="NIH MGC_92"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   807 CAGTAAGGATGGATATTTTTTGTACATTTAAAACTA
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Best Local S
Matches 471
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2039 GTGAGGCAGGAATTTCTTGAACCCGGGAGGCAGAGGTTGCAGTGAAGCGAGATCACAC 2098

GSS 06-NOV-2000

2156

684

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2038 GGTGAGGCAGAGAATTTCTTGAACCCGGGAGGCAGGGTTGCAGTGAAGCGAGATCACA 2097
                                                                                                                                                                                                                                        AF101960 2971 bp DNA linear GSS 06-NOV-2000 AF101960 Human Homo sapiens genomic clone pTWB59.14, genomic survey
                                                               566 derdadgaererereregaecergagagagagagagariderardagagarideraka 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1442 TITITITITITITAGAAAGAGICITGCICTTICACCCIGGCIGGAGGGCAGIGGIGT 1501
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1622 AGAGATGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACTTTTTGCTGTCATAATTGT 1681
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Medicine and Radiology
Duke University Medical Center
Box 2610, MSRB, Room 117, Durham, NC 27710, USA
part of a 1.4 megabase_contig including the LOHIIA metastasis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           538 AATCTTGGCTCACTGCAACCTCCGCCTCGGTTCAAGCGATTCTCCTGCCTCAGCCTC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
6.5%; Score 255.8; DB 28; Length 2971;
Best Local Similarity 65.4%; Pred. No. 5.1e-30;
Matches 478; Conservative 0; Mismatches 177; Indels 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic_DNA"
/db_xref="taxon:9606"
/map="11p15.5"
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/clone_lib="Human"
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                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
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TITLE
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PUBMED
                                                                                                                                                                                                   RESULT 14
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KEYWORDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1798 GGCCTCAGGAGTAGAGGTGATCTCTGCTCGAAAGAGAAATAGAATGAAATATTCTCCGG 1857
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         334 -----TGAGACATACTTCACATACCATACATTCACATATTAAAGTGTAACAAATCAG 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     565
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1501 TGAICTCAGCICACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCTGCTTCAGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             387 TCCGGGCATGGTGGCTCATGCCTGTAATCCCAGCATTTGGAANGGCCGAGGCAGGTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1918 CACCTGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAACCCCGGTCTACTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                282 GGGTGTGAGCCACCACCCAGCCCACATACTGTTTTTAAAAAGGCTTAAT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13; Length 693;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181 itaiagagatagagiciciciaigitacctaagchgaicicaaactcigg---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 259.2; DB 13; Length
Pred. No. 3.7e-30;
0; Mismatches 216; Indels
                                                                                                                          /dione="UI-H-DF0-ben-m-20-0-UI"
/tissue_type="Subchondral Bone"
/dev_stage="Adult"
/lab_host="BH10B (Life Technologies)"
                                                                       organism="Homo sapiens"
                                                                                        /mol_type="mRNA"
/db xref="taxon:9606"
                                     Location/Qualifiers
Seq primer: M13 FORWARD POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 6.6%;
Best Local Similarity 64.7%;
Matches 465; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1441
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23; Mismatches 243;
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Sin, W. B., Gruber, C., Jessee, J. and Polayes, D.
Full-length cDNA libraries and normalization

Dipublished (2001)

Con reb 16, 2001 this sequence version replaced gi:12942694.

Con reb 16, 2001 this sequence version replaced gi:12942694.

Con reb 16, 2001 this sequence version replaced gi:12942694.

Contact: Genoscope

Genoscope - Centre National de Sequencage

BP 191 91006 EVRY cedex - France

Email: seqrefs@genoscope.cns.fr, Web: www.genoscope.cns.fr

Library was constructed by Life Technologies, a division of

Invitrogen. This sequence belongs to sequence cluster 2057.f For

more information about this cluster, see

http://www.genoscope.cns.fr/

cgi-bin/cluster.cgi?seq=CSODK001AB07NP1&cluster=2057.f. Contact :
Feng Liang Email: fliang@lifetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600

Faraday Avenue Genoscope sequence ID : CSODK001AB07NP1.
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/cell line="HELA"
/clone lib="HGMO sapiens HELA CELLS COT 25-NORMALIZED"
/note="1st strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and ECOR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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AL578531
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'db_xref="taxon:9606"
'clone="CS0DK001YC13"
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Homo sapiens Homo sapiens Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 Prouty,S.M., Zhang,L. and Stenn,K.S. Stearoyl-coa desaturase gene promoter Patent: WO 0236780-A 15 10-MAY-2002;

REFERENCE AUTHORS TITLE JOURNAL

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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TEATURES Johnson & Johnson Consumer Companies, Inc. (US) Location/Qualifiers Location/Qualifiers 14150 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"	Query Match Best Local Similarity 100.0%; Score 3958; DB 6; Length 4150; Best Local Similarity 100.0%; Pred. No. 0; Matches 3958; Conservative 0; Mismatches 0; Indels 0; Gaps 0; Qy I AGGAATTCATCCATTTRAATCATACAATTTAATGGGTTTTAGTATTCACAGGTTGTGC 60	Db	ч. н н	ACAT 2	OY 241 GTGAGACTTTGTGACTGCTTTCACTTAGCÀTTCTATTTTAAGGCTCATTATGTTA 300  Db 241 GTGAGACTTTGTGACTGCTTTCACTTAGCATTCTATTTTTAAGGCTCATTATGTTA 300	GTAT      GTAT	TGGC 4	4, 4, 8 8 8	FTAAT 5	7017 			OY 721 CCATGCCTGGTGATATTTTTTTTTGAAACAGGGTATCACTCTGTTGCCCAGGCTGGA 780	<b>8</b> 8	QY         841 GCCTCAGCATCCTGAGTAGCTGGGACTAGAGCTTGTGCCACCAGCCAACTAAGTTT         900           Db         841 GCCTCAGCATCCTGGGACTACAGCCTTGTGCCACCAACTAACT	י ס

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8 8 8 8 8	8 6 8 6	oy da	Qy Oy Ob	90 OS	B & B &	QY Db RESULT 2 AF320307	LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE
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JOURNAL MEDLINE PUBMED REFERENCE AUTHORS TITLE JOURNAL FEATURES SOURCE	ال ال المالية	mRNA exon 5'UTR	CDS	ORIGIN  Query Match Best Local Similarity Matches 3958; Conser  Qy	Qy         61           Db         61           Qy         121           Db         121           Qy         181           Qy         241           Db         241           Qy         301           Db         301

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NOTE: This is a 'working draft' sequence. It currently consists of 12 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                           Insert size: 167000; agarose-fp
Insert size: 158251; sum-of-contigs
Quality coverage: 4.9 in Q20 bases; agarose-fp
Quality coverage: 5.2 in Q20 bases; sum-of-contigs
           Sequencing vector: M13; M77815; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Assembly program: Phrap; version 0.960731 consensus quality: 155177 bases at least Q40 consensus quality: 155177 bases at least Q20 Consensus quality: 157011 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1: gap of 100 bp

9: contig of 12378 bp in length

9: gap of 100 bp

1: contig of 20429 bp in length

1: contig of 26413 bp in length

1: gap of 100 bp

1: contig of 26413 bp in length

2: contig of 30346 bp in length

2: contig of 30346 bp in length

2: contig of 37314 bp in length

3: contig of 37314 bp in length
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2397: gap of 100 bp
5719: contig of 3322 bp in length
5819: gap of 100 bp
10149: contig of 4330 bp in length
10249: gap of 100 bp
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                                                                                                                                                                                                                      TOTIGICATCCCCCCCCCCCCTTACCTCCACGCGGGACCGCCCGCGCCCAGTCAACTCC 3840
                                                                      TGTGGTGTCGGTGTCGGCAGCATCCCCGGCGCCCTGCTGCGGTCGCCGCGAGCCTCGGCC 3780
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3601 GCCAATGGCAACGGCAGGACGAGGTGGCACCAAATTCCCTTCGGCCAATGACGAGCCGGA 3660
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Homo sapiens clone RP11-2M13, WORKING DRAFT SEQUENCE, 12 unordered
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 159351)
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------ Project Information
Center project name: L2667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Birren, B., Linton, L., Nusbaum, C. and Lander, E. Homo sapiens, clone RP11-2M13
Unpublished
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HTG; HTGS_PHASE1; HTGS_DRAFT.
Homo sapiens (human)
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KEYWORDS
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<i>8</i> €	& <u>8</u>	& A	yo d	Š A	S da	δ d	QV Dp	oy Qu	QQ Dp	ර් සි	S dd	P &	B &	QV Dp	A G	oy da	<b>%</b> 40
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66032 TITITITITITITICAGAAAGAGICTIGCICTITICACCCTGGCIGGAGGCAGIGGTGIG 1503 ATCTCAGCTCACTGCAACTTTCGCCTCCGGGTTCAAGCAATTCTCCTGCTTCAGCCTCC 66092 ATCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCTGCTTCAGCCTCC 1563 CAAGTAGCTGGGAACTTTCGCCTCCCAGGTTCAAGCAATTTTTGTATTTTTAGTA 16152 CAAGTAGCTGGGACTACAGGCACTTCCCACCAGCTCATTTTTTTAGTA 1623 GAAATGGGATTTCACTTTGTTGGCCAAGCTCCAACTTTTTGTATTTTTAGTA 1621 GAGATGGGATTTCACTTTGTTGGCCAAGCTCCTCAAACTTTTTTTT	1683 GTAACTATTGCTGAGGTAGGGCCCCCGGACCAAAAAAAAA	66332 TCCAAATCAGTGTTTGACCACTGTTAGAAACCACAATGTGACCAGGGCCT  1803 CAGGAGTAGAGTGTTGACCACTGTCACTTGAGAACCACAGTGTGACCAGGGCCT  1803 CAGGAGTAGAGGTGATCTCTGCTCGAAAGAAAATAGAAATATCTCCGGGCCAG	1863 GCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCACCT				2 TGCCACATGCCAAGTACTTCTGAGGCATGACTGAGTGAGT		е п	2463 CTCCGTATTTCTCCTCTTCCCAGGGAAGGATCCTAGGGAGGTATTGGGAAAGATG 2522 67051 CTCCGTATTTTCTCCTCTTCCAGGGGAAGGATCCTAGGGCAGTATTTGGGAAAGACATG 5711 2523 GGCATGGAAGGACACCGGGTGAATGCAGAGCTCTGAGCTCTCAGGACATG 6711 2523 GGCATGGAAGACACCGGGTGAATGCATAGCCTGCTTCTGAGCTCTCATGGTAAGG 2582

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46.2%; Score 1827.2; DB 2; Length 185644;
Best Local Similarity 93.9%; Pred. No. 0;
Matches 1871; Conservative 0; Mismatches 118; Indels 3; G
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13957: contig of 4290 bp in length
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13957: contig of 42128 bp in length
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13955: gap of 100 bp
181355: gap of 100 bp
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181355: contig of 2069 bp in leng
181355: app of 100 bp
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                                                                                                                           TTTACAGAAGCCTCATTAGCATTTCCCCAGAGGCAGGGGCAGGGGCAGAGGCCGGGTGGT 68309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL391723 185644 bp DNA linear HTG 11-SEP-2001
Homo sapiens chromosome 10 clone RP11-38B21, WORKING DRAFT
SEQUENCE, 14 unordered pieces.
                                                                                                       3781
                                                                                                                                                                               CGCACTITGCCCCTGCTTGGCAGCGGATAAAGGGGGCTGAGGAAATACCGGACACGGTC 3901
                          TITACAGAAGCCICATTAGCAITTCCCCCAGAGGCAGGGGCAGGGGCAGAGGCCGGGTGGI 3721
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Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Assembly program: XGAP4; version 4.5 Sequencing vector: plasmid; L08752; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads consensus quality: 175002 bases at least Q40 Consensus quality: 175002 bases at least Q40 Consensus quality: 179431 bases at least Q40 Insert size: 184344; sum-of-contigs at least Q20 Insert size: 140788; 6.0% error; agarose-fp Quality coverage: 4.15x in Q20 bases; sum-of-contigs Quality coverage: 6.51x in Q20 bases; agarose-fp
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Center code SC
Web site: http://www.sanger.ac.uk
Contact: humquery@sanger.ac.uk
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Center project name: bA38B21
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Mammalia; Eutheria; Primates;
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HTG; HTGS PHASE1; HTGS_DRAFT.
Homo sapiens (human)
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AL391723/c
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11206   ACCARCCARCCARCTATORICAL CONTINUED   11210
195544 @CCTCTTGAGACATAACCAGANNERRANDANNERRANDANNERRANDANNERRANDANNERRANDAN 19155   2028 TAKTTGGGAGGGTGAGCACAGAGACATCATTTGACCCGGGAGGGA

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<del>-</del>	Oy 3141 TGCGGTCCCGGGTGAGCAGCGCGTGGCTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGT	1080	OY 3320 CGGAGATGTTAGTGGTGGCGCCCCCGAGGGT  Db 1199 CGGAGATGTTAGTGGTGGCCCCCCCCGGAGGGT  ON 3380 CAGTGCCCACCCACCGGTGTGCCCGA	1259	1319	Db 1379 GGCCAGAGCCCAGGGCGCGCGCAAAAAAAAAAAAAAAA	Db 1439 ACGAGAGACTGGGGGAAACAGCAATATCGCAGGGAAACAGCAAATACGGGGGAATGACAATGACAAATTCCCTTCGGCGAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAATGACAAATGACAATGAATTACAATGAATTACAATGAATTACAATGAATAATTACAATGAATG	1499	Db 1559 GCATTICCCCAGAGGCAGGGGGCAGGGGGACAAGG Qy 3740 GCATCCCCGGCGCCCTGCTGCGGCGGTCGCGGGAA	Db 1619 GCATTACCTCCAGGACCGGAACCGCGCAAA  Qy 3800 GCCCTTACCTCCACGGGAACCGCCGCGCAACAAAAAAAAA	Db 1679 GCCCTTACCTCCAGGGGGGGCCCCCCCAACAACAACAGGGAAAAAAAA	Db 1739 GGCAGGGATAAAGGGGGGGTGAGGAATACCC Oy 3920 CCTTTAAATTCCGGGTCGGGAGCCTCCACGC	1799	RESULT 7 AC139668 AC139668 161827 bp LOCUS AC139668
HORS Enkins, D.K., Winther, M.D., Haardt, M., Goldberg, Y.P., Nwaka, S.O., Ponton, A., Allen, S.J., de Antueno, R.J. and Knickle, L.C.  Extregulated genes, uses thereof, and compounds for modulating  Bame ame  RNAL Patent: WO 024666-A 21 23-AMY-2002;  KENON GENETICS INC (CA)  Location/Qualifiers  1. 1970    J. 1970   And Lype="Homo sapiens"   Mol Lype="unassigned DNA"	IGIN Query Match Best Local Similarity 99.7%; Pred. No. 0; Matches 1834; Conservative 0; Mismatches 2; Indels 3; Gaps 3;		4 (4 17	2301 TCACACCGGACAGGGGGCCAGGACTGGAATGCAGTCTCCTGGTCACTGGCCAGAGAGTTG 2360 	242		∪ 4r	2541 GTGAANGCATAGCCTGCCTGGTTCTGAGCTCTCATGGTAAGGCTCCTACAGAAA 2600  420 GTGAATGCATAGCCTGCTTGAGCTCTCATGGTAAGGCTCCTACAGAGAA 479	AGATGGGGGCACAGGGACACAATCAGTAGGTCACAGTTTTTTTT		0 9	7 2	290	2901 ATTCCACATCCTATCGCCTGCTGCTGGGGGGAAAACACATGTCAGTGTTTCCTGA 2960 
REFERENCE AUTHORS TITLE JOURNAL FEATURES	ORIGIN Quer Best Matc	os ap	음 상 음	75 PG	75 25	Qy	상         역	Sy dd	y dg	PP Ad	oy Og	දු දු	Qy Dp	QY Dp

GGCCGGGTGGTGTGGTGTCGGTGTCGGCA 3739 AGTCAACTCCTCGCACTTTGCCCCTGCTT 3859 CGGACACGGTCACCGTTGCCAGCTCTAG 3919 1558 3799 1678 1438 3619 3679 CAGAGAGAAAGCTCCCGACGGGGATGCC 3499 3559 1498 3259 3319 1198 3379 1258 AAGGCCGGTCCTGGGCTAGGCTCCGCGC 3439 3200 1139 3140 1019 1079 3080 959 actica Gaaga aa Cagaggggggg GOGGGGCTTCCCGCGT - CCCCAAGCTCC CCAGCCTGTGTGTGCGCCGGAGTCCGG gecegecadaeccarretroccadece GGCGGGCAGAGCCATTGTTCGCAGGCG CACCGCGG 3958 

HTG 08-FEB-2003

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140430 CAGTCTGAAGAATCTCCAAAACCTCCCGCACGCATCCTGGAGGCGCGGCGAGCATGGGGATGG 140489
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Cheng,J.-F., Hamilton,M., Peng,Y., Mukherjee,S., Hosseini,R.,
Peng,Z., Malinov,I. and Rubin,E.M.
Direct Submission
Submitted (08-FBB-2003) Genome Sciences, Lawrence Berkeley National
Laboratory, 1 Cyclotron Rd., Berkeley, CA 94720, USA
                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Cercopithecidae,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence has been compared to sequences of other species using Vista (http://www-gsd.lbl.gov/VISTA), The results can be viewed at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 1758; DB 2; Length 161827;
Pred. No. 0;
0; Mismatches 135; Indels 24; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Summary Statistics:
Sequencing vector: Plasmid; pUC18
Chemistry: Dye-terminator Big Dye
Assembly program: Phrap version 0.990329.
* NOTE: This is a 'working draft' sequence. It currently
* consists of 1 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               end information.
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                                                                                                                                                             Cercopithecinae, Papio.
1 (bases 1 to 161827)
ChengJ.-F., Hamilton,M., Peng,Y., Mukherjee,S., Hosseini,R.,
Peng,Z., Malinov,I. and Rubin,B.M.
Direct Submission
           hamadryas clone RP41-194B17, WORKING DRAFT SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://pga.lbl.gov/cgi-bin/search_cvcgd?type=n&value=SCD
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Lagan (http://lagan.stanford.edu/) and paired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Papio hamadryas"
/mol_type="genomic DNA"
/db_xref="taxon:9557"
                                                  AC139668.1 GI:28273351
HTG; HTGS PHASEL; HTGS DRAFT.
Papio hamadryas (hamadryas baboon)
Papio hamadryas
                                                                                                                                                                                                                                                                                                                                                                                        Sequence Produced by Berkeley PGA
Web site: http://pga.lbl.gov
Center Code: PGABERK
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Best Local Similarity
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                    DEFINITION
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36.6%; Score 1448.2; DB 2;
Best Local Similarity 99.1%; Pred. No. 0;
Matches 1456; Conservative 0; Mismatches 13;
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contig of 10853 bp in length
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contig of 11651 bp in length
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Submitted (08-FEB-2003) Genome Sciences, Lawrence Berkeley National Laboratory, 1 Cyclotron Rd., Berkeley, CA 94720, USA
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                                                                                                                                                                                                                                                                                                                      Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Strepsirhini; Lemuridae; Lemur.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Summary Statistics:
Sequencing vector: Plasmid, pUC18
Sequencing vector: Plasmid, pUC18
Chemistry: Dye-terminator Big Dye
Assembly program: Phrap version 0.990329.
* NOTE: This is a "working draft' sequence. It currently
* consists of 1 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Avid (http://baboon.math.berkeley.edu/mavid),
Lagan (http://lagan.stanford.edu/) and paired end information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The order-orientation of the draft sequence was accomplished
                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 190784)
Cheng, J.-F., Hamilton, M., Peng, Y., Mukherjee, S., Hosseini, R.
Peng, Z., Malinov, I. and Rubin, E.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 (bases 1 to 190784)
Cheng,J.-F., Hamilton,M., Peng,Y., Mukherjee,S., Hosseini,R.
Peng,Z., Malinov,I. and Rubin,E.M.
Direct Submission
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Lemur catta clone LB2-62P23, WORKING DRAFT SEQUENCE.
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                  TITITITITITITICAGAAAGAGTCTTGC 1471
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1. .190784
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                                                                                                                                                                                                                                                                                 Lemur catta (ring-tailed lemur)
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AC139669.1 GI:28273352
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Unpublished
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                      Score 816.6; DB 2;
Pred. No. 2.7e-189;
0; Mismatches 389;
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Best Local Similarity 73.7%;
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Medrano,J.F., Islas-Trejo,A.D. and Johnson,A.M.
Direct Submission
Submitsed (21-FEB-
Cone Shields Avenue, Davis, CA 95616-8521, USA
Location/Qualifiers
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g099, 10331,13019, 13218)
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Medrano,J.F., Islas-Trejo,A.D. and Johnson,A.M.
Genomic sequence of the bovine stearoyl-CoA desaturase
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/organism="Bos taurus"
/mol_type="genomic DNA"
/db_xref="'taxon:9913"
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Db 1450 AGAAAGGGAAGGGAAGGGAAGTGAAGGAAGGGAAGGGGAGGA	RESULT 11  AX357255 LOCUS DEFINITION Sequence 1 from Patent Wood Sequence 1 AX357255.1 GI:18674409 KEYWORDS SOURCE Home sapiens (human) ORGANISM Home sapiens (human) ORGANISM Home sapiens (human) ORGANISM Home sapiens (human) AUTHORS Brownlie,A.J., Hayden,M.R. Gray-Keller,M.P. and Miyar TITLE Methods and compositions utigilyceride reducing the patent: Wo 016254-A 1 30 OUGRIANAL Patent: WO 016254-A 1 30 OURNAL TATLE Nethods Inc. (CA) (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); University of Britical Colling Authors (US); UNIVERSITY OF STATE (US)  ON 3459 CCCAGCCCCTTCCAGAGAAAGGAAAGGAAAGGAAAGGAA	
404 GGTAGGCTCCACAGCCCCGGAAAAGGCAAGACTGTGAGCCACAACAGTGAGAGTCAGA 463 2636 GCATCTCAGGGACCACACCCCGGAAAAGGCAAGACTCAGACCACTCAGTCAG		

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Miyazaki,M.
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therapeutic agents
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CA) ; WISCONSIN ALUMNI RESEARCH FOUNDATION
British Columbia (CA)
lifiers AGCCAATGGCAAGGGAGGAGGTGGCACCAAATTCC 3638 AGITIACAGAAGCCTCATIAGCATITCCCCAGAGGCAGG 3698 ACTCCCGACGCGGGATGCCGGGCCAGGGGCG 3518 AGAAACAGAGGGAGGGGAGCGAGGAGCTGGCGGCAG 3578 TITACCICCACGCGGGGCCGCCGCCAGTCAACICC 3840 ö 183 1569 TTCCCCAGAGGCAGGGCAGGGCAGAGGCCGGGTGG 3720 3780 scarccagrrcridcircrrcgcccccagc--acgcc 1686 checececedaredes de la comparta del comparta de la comparta del comparta de la comparta del comparta de la comparta del comparta de la comparta del comparta del comparta de la comparta dela comparta del comparta del comparta del comparta del comparta de AGCGGATAAAAGGGGGCTGAGGAAATACCGGACACGGT 3900 PAT 13-FEB-2002 AGGAGCTCGCGGCAGAGGGAACAGCAGATTGCGCCGA 1509 63 data; Craniata; Vertebrata; Buteleostomi; ates; Catarrhini; Hominidae; Homo. GIGGCACCAAAITCCCTTCGGCCAATGACGAGCCGGA cocceececciciecieceencecceceaeccaceecc 0; Gaps ore 498.4; DB 6; Length 617; ed. No. 1.6e-111; Mismatches 1; Indels 0; linear TTAAATTCCCGGCTCGG 3939 TTAAATCCCCAGCACAG 1845 DNA o sapiens" ssigned DNA" n:9606" 617 bp 100162954.

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                                                                                                                                                     /note="Tandem repeat. Forced join. Gap size estimated be approximately 280bp by restriction digest data." 62058..6236 /note="Sequence from overlapping clone RP11-228B15. Assembly confirmed by restriction digest data." 153662..15369. Anote="Single clone region. Assembly confirmed by restriction digest data." restriction digest data."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11.6%; Score 460; DB 9; Length 164201;
58.9%; Pred. No. 1.1e-101;
ative 0; Mismatches 660; Indels 111;
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                               /chromosome="9"
/clone="RP11-203J24"
/clone_lib="RPCI-11.1"
55900
db xref="taxon:9606"
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Submitted (09-JAN-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CB10 18A, UK. B-mail enquirise:

Cambridgeshire, CB10 18A, UK. B-mail enquirise:

humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk

On Nov 30, 2001 this sequence version replaced gi:16944853.

During sequence assembly data is compared from overlapping clones.

Where differences are found these are annotated as variations
together with a note of the overlapping clone name. Note that the
variation annotation may not be found in the sequence submission
corresponding to the overlapping clone, as we submit sequences with
only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all
regions were either double-stranded or sequenced with an alternate
chemistry or covered by high quality data (i.e., pared quality >=
30); an attempt was made to resolve all sequencing problems, such
as compressions and repeats; all regions were covered by at least
one plasmid subclone or more than one M13 subclone; and the
assembly was confirmed by restriction digest. The following
abbreviations are used to associate primary a covered by
MISSPROT; Tr., TREMBL; Wp., WORMPEP; Information on the WORMPEP
there is the feature table with their source databases: Em:, EMBL; Sw.,
there is the feature table with their source databases: Em:, EMBL; Sw.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AL157935 164201 bp DNA linear PRI 09-JAN-2002 Human DNA sequence from clone RP11-203J24 on chromosome 9, complete sequence.
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Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 164201)
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VECTOR: pBACe3.6
this sequence is the entre insert of clone RP11-203J24 The true
left end of clone RP11-379C10 is at 163899 in this sequence. The
true right end of clone RP11-228B15 is at 66809 in this sequence.
                                                                                                                                                                   304 GCGGTCGCCGCGCGAGCCTCGGCTCTGTCTCCTCCCCCCTCCCGCCCTTACCTCCCCGGGGGG
                                                                                                                                                                                                                                                                                                                    GCGGTCGCCGCGAAGCCTCGGCCTCTCTCTCCCCCCTCCCGCCCTTACCTCCACGCGG
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/mol_type="genomic DNA"
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AUTHORS TITLE JOURNAL

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DEFINITION

ACCESSION VERSION KEYWORDS SOURCE

RESULT 12 AL157935

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FEATURES

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	ACCESSION AC119 VERSION AC119 VERSION AC119 VERSION AC119 SOURCE HTG; SOURCE HOMO ORGANISM HOMO ORGANISM HOMO	REFERENCE 1 (Marry Authors Muzny Alabr Barba	Bouck Buhay Carro Carro Chen,	Cleve Davil	Earnh Falls Gabie Gorre	Harri Herne Homei	Karle Krato Li,J.	Manse Masse Mines Moses	Nguye Oragn Peten Rives	Schen Soden Sutte	Usmax Wang Will: Wu, C	Wein TITLE Direc JOURNAL Unpul REFERENCE 2 ()	HH H	Bayl REFERENCE 3 () AUTHORS WOrl	JOURNAL Subm of M Bayl COMMENT On M	
5788 CAGCCAGGGGCTGGGATTCGTGCCCAGGTAGGCCTGTGCTCTCACATTTTCTTTTCTTT 5847  1191 ACAGGCAGAGATTCAGGGAAGAAAACTTGGGAAAATGAAGCATGTTTAGAAATCAGCAA 1250  1191 ACAGGCAGAGGTTCATGGGAAAAAACTTGGGAAAATGTCACTCTTCCTGCCCAGGCTGGAGTGC 5904  1251 GAGTGCAGGGGTTTTTCGAAGTTTTATTTTATATTCTGTTGACAAATGTGCAGTTTGATG 1310	11 11 65		AAAATCACAATTITITITITITITITIGAGAAAGAGTCTIGCTCTTTCACCTGGCTGGAG TITITITICTATTATTATTATTATTTTTGAGAAGAGTCTTGCTCTGT-TGCCAGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	1491 GGCAGTGGTGTGACTCACTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCT 1550 	1551 GCTTCAGCCTCCCAAGTAGCTGGGACTACAGGCACTTCCCACGCCATGCCCAGTGATTTT 1610	1611 GTATTTTTAGTAGAGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACT 1663 	1664TITIGIGIGICAIAANTGITGIAACTAITGITCCITTIGCIGAGGIAGGGCCCCAG 1719 6322 TCAGGIGATCCACCGCCTIGGCCTCCCAAGIGCIAAGAGTTAIAGGCGTGAGCCACTGC 6381	1720 ACCAAAAAAATAAATCITAGAATCCAAATCAGTGTGTGTGGTTTGACCA 1768 	1769 CIGICACTIGAGAACCACAGTGACCAGGGCCTCAGGAGTAGAGGTGAICTCTGCTCGA 1828 	1829 AAGAGAAATAGAATGAATATTCT	1854CCGGGCCAGGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCA 1905	1906 AGCANGTGGANCACCTGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAACC 1965 	1966 CCGTCTCTACTAAAAATACAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCA 2025	2026 GCTACTTGGGAGGCTGAGGCAGGGAATTTCTTGAA-CCCGGGAGGCAGAGGTTGCAGTG 2084 	2085 AAGCGAGATCACACTGCACTCCAGCCTGGG-GGAGAGAGCGAGACTTCCTCTCAAAA 2143	2144 RARCRARARGRA 2161 

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53839: gap of unknown length 61229: contig of 7990 bp in length 68906: contig of 6977 bp in length 68906: contig of 6977 bp in length 68006: gap of unknown length 78780: gap of unknown length 78780: gap of unknown length 100730: contig of 10651 bp in length 100730: contig of 1169 bp in length 112190: contig of 11160 bp in length 112290: gap of unknown length 112200: gap of unknown length 122560: contig of 1136 bp in length 122560: contig of 11245 bp in length 135264: gap of unknown length 135564: gap of unknown length 147715: gap of unknown length 147715: gap of unknown length 159369: contig of 12154 bp in length 15356: contig of 12154 bp in length 173250: contig of 12154 bp in length 173250: contig of 12154 bp in length 173250: contig of 12154 bp in length 17325: contig of 12154 bp in length 17325: contig of 12154 bp in length 17325: contig of 12154 bp in length 17325: contig of 12154 bp in length 17325: contig of 12154 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17325: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 17355: contig of 12857 bp in length 12950: contig of 12857 bp in length 12950: contig of 12857 bp in length 12950: contig of 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="texon:9606"
/chromosome="3"
/clone="RP11-759D18"
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58.5%;
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Best Local Similarity 58.5
Matches 1099; Conservative
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                                                                                                Center clone name; RPI1-759D18

Center clone name; RPI1-759D18

Sequencing vector: Plasmid;
Chemistry: Dye-terminator Big Dye: 100% of reads
Assembly program: Phrap; version 0.990329

Consensus quality: 169013 bases at least Q40

Consensus quality: 17459 bases at least Q20

Consensus quality: 178019 bases at least Q20

Estimated insert size: 177488; sum-of-contigs estimation
Quality coverage: 3x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                contig of 1266 bp in length
gap of unknown length
contig of 1082 bp in length
gap of unknown length
contig of 1665 bp in length
gap of unknown length
contig of 1065 bp in length
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bp in length
length
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length
bp in length
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gap of unknown length
contig of 3332 bp in length
gap of unknown length
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unknown length
of 5851 bp in length
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gap of unknown length
contig of 2262 bp in length
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length
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bp in length
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of 2673 bp in length
unknown length
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            site: http://www.hgsc.bcm.tmc.edu/
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contig of 1019 b
gap of unknown l
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contig of 1524 b
gap of unknown 1
gap of unknown 1
contig of 1027 b
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of 2249 b
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of 3313 b
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of 1569 h
unknown
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                              Drafting Center Code: BCM
Contact: hgsc-help@bcm.tmc.edu
------ Project Information
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contig of
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Homo sapiens BAC clone RP11-469M7 from 2, complete sequence. AC005037
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                                                                                                                                                                                                                                          Score 433; DB 9; Length 17
Pred. No. 4.8e-95;
0; Mismatches 670; Indels
                                                              /organism="Homo sapiens"
mol_type="genomic DNA"
db_xref="taxon:9606"
/chromosome="10"
/clone="RRP11-565H13"
/clone_lib="RRPG1-11.2"
pBACe3.6.
Location/Qualifiers
1. .175842
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Best Local Similarity 58.3
Matches 1071; Conservative
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147480 GTTCAGGCAAACCAGATTATTAATATTACTAACATCCTCACTGGTCATATCCCAGGATCT
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                                                                                CAGCAAGAGTGCAGGGGTTTTTCGGAGTTTTTATTTTTATTCTGTTGACAAATGTGCAGT
                                                                                                                                                                                                                                  1305 IIGAIGAAGAIACAAGIIAIACIAAGIGAGAAGIGAGAAIIAAGGCIGGAAIAGGGCGII
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PRI 30-SEP-2000

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to the right is RPII-91M5. Actual start of this clone is at base position 1 of RPII-469M7; actual end is at 190508 of RPII-469M7. Location/Qualifiers
                                                                               /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4727. .5018
/rpt_family="Alu"
5545. .5585
/rpt_family="(CATA)n"
5586. .5873
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                                                                                                                                                                   /clone_"RP11-469M7"
/clone_lib="RPCI-11"
155. .22
/rpt_family="L2"
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4353. .4664
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6924. .7294
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/rpt_family="AT_rich"
8050. .815
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/rpt_family="AT_rich"
9450. .9752
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33395_.3621
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535. .1823
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2392_ .256?
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.5873
/rpt_family="Alu"
5876. .6007
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/rpt_family="Alu"
1502. . 1533
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3316. .3338
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1727. .5018
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6327. .6713
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8356. . RFP
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0371 .10680
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/rpt_family="L1"
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'rpt_family="Alu"
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.1138. .11410
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1960. .12189
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1664. .11959
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12190. .12334
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1446. .11663
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1103<u>9</u>.
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                                            FEATURES
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                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (12-JUN-1998) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Parkway, St. Louis,
Mo 63108, USA
4 (bases 1 to 190508)
Waterston, K.H.
Parterston, K.H.
Submission
Submitted (14-MAY-1999) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mapping information for this clone was provided by Dr. John D. McPherson, Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://genome.wustl.edu/gsc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (30-SEP-2000) Department of Genetics, Washington University, 4444 Forest Park Avenue, St. Louis, Missouri 63108, USA On May 14, 1999 this sequence version replaced gi:3309089.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NOTICE: This sequence may not represent the entire insert of this clone. It may be shorter because we only sequence overlapping clone sections once, or longer because we provide a small overlap between neighboring data submissions.
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                                                               Craniata; Vertebrata; Euteleostomi;
Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence of Homo sapiens BAC clone RP11-469M7
                                                                                                                                            Toward a complete human genome sequence
Genome Res. 8 (11), 1097-1108 (1998)
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VECTOR: pBACe3.6
NEIGHBORING SEQUENCE INFORMATION:
                                                             Eukaryota, Metazoa, Chordata,
Mammalia, Eutheria, Primates,
1 (bases 1 to 190508)
                                                                                                                      Sulston, J.E. and Waterston, R.
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                                                                                                                                                                                                                      2 (bases 1 to 190508)
Abbott, A. and Le, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MO 63108, USA
5 (bases 1 to 190508)
Waterston, R.
                                                                                                                                                                                                                                                                                                 3 (bases 1 to 190508)
Waterston, R.H.
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                          sapiens (human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                              Homo sapiens
                                                                                                                                                                                                                                                                               Unpublished
                                                                                                                                                                                   99063792
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	Qy	908 GATITITIGGTAFAGAGGTCTTGCTATGTTGCTCAGGCTGTATITITATTGTTGAGAC 967
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	λö	1268 GGAGITTTATTATATTCTGTTGACAAATGTGCAGTTTGATGAAGATACAAGTTATACT 1327
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562 TCTTTCTTTTTGTTGTTGTTTTGAGATAGGGTCTCACTTTGTTACCCAGGCTGGAG	64 	1627 TGGGATTTCACTTTGTTGGCCAAGCTGGTCTCAAACTTTTTGCTGTTCATAATTGTTGTAA 1686
66758 †CTGATTTTTTTTTTTTTTTTTTTGAGACAGGTTTCACTGTCACCCAGGCTGGAG 66699	ò	1687 CTATTGTTCCTTTTGCTGAGGTAGGGCCCCCAGACCAAAAAAAA
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66638 GCTTCAGCCTCCCAAGTAGCTGGGACTATAGGCATGTACCACCATGCCTGGCTAATTTTT 66579	ð	AGIAGAGGIGAICICI
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	OY Db	1867 GGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCACCTGAGG 1926

Search completed: May 13, 2004, 09:06:23 Job time : 24135.2 secs

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ADB72626 AAK79820 AAK68091 ACF62737

Human imm Human imm Cancer ba MRP1 base

ALIGNMENTS

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MRP1 base Human UGT Human MDR Human GPC DNA encod

ABK8459 AAD54587 AAD5405136 ADB2006136 ADB97940 ADB92114 ADC87616 AAC33462 AAL36684 AAL36684 AAL36684 AAL36684 AAL36684

DNA encod Human cDN Human LIM

Cancer ba

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Copyright (c) 1993 - 2004 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                                             are fat regulated. (I) or the polympotate segment (II) are useful for diagnosing the presence of or a predisposition for a disorder involving fatty acid regulated genes in a subject. A composition containing (I) or (II) is useful for treating a disorder involving fatty acid regulated genes; where the disorder is selected from a polymnsaturated fatty acid (PURPA) disorder, excema, cardiovascular disorders (such as hypertriglyceridaemia, dyslipidaemia, atherosolerosis, coronary artery disease, cerebrovascular disease or peripheral vascular disease, infilammation (such as sinusitis, asthma, pancreatitis, osteoarthritis, rheumatoid arthritis or acne), body weight disorders (such as obesity, cachexia or anorexia), psychiatric disorders cancer, cystic fibrosis, pre-menstrual syndrome, diabetes, and diabete; complications: (I) or (II) is useful as seesarch agent and materials for disease. (II) is useful for constructing nucleotide probes and primers, for detecting genetic polymorphism, for detecting changes in the level of expression of (II), and as a diagnossic tool. This sequence represents a control region from a gene encoding a fatty acid regulated protein
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          cerebrovascular disease; peripheral vascular disease; inflammation; sinusitis; asthma; pancreatitis; osteoarthritis; rheumatoid arthritis; acce, body weight disorder; obesity; cachexia; ancrexia; psychiatric disorder; cancer; cystic fibrosis; pre-menstrual syndrome; diabetes; diabetic complication; genetic polymorphism; ds.
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  coronary artery disease;
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Nwaka SO;
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tive 0; Mismatches
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Jenkins I
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 dyslipidaemia; atherosclerosis;
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Matches 1834; Conservative
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CCAGGTGCTTGTCTTCCTGGGAAGTGAATCATTGGCGCAGCACTCCGTATTTTCTCCTCT
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The present sequence is that of the promoter region of the human stearcyl cot desaturase-1 (hSCD1) gene. The promoter structure is similar to that of the mouse SCD1 promoter and contains conserved regulatory sequences for the binding of several transcription factors. Like the mouse SCD1, the human SCD1 gene is regulated by polyunsaturated fatty acids and cholesterol at the level of gene transcription. The sterol regulatory element binding protein (SREBP) plays a role in the transcriptional activation of the gene. The promoter can be used to identify regulatory clements that modulate and control SCD1 expression in humans, and to identify regulatory proteins that are suitable targets for small molecule intervention to modulate expression of SCD1 in humans. The invention provides screening assays based on the role of hSCD1 in human diseases, is used insorders or conditions relating to serum levels of triglyceride, very low density lipoprotein, high density lipoprotein, low density in collections relating to serum levels of triglyceride, very lipoprotein, total cholesterol, or production of secretions from mucous membranes, monounsaturated fatty acids, wax esters, etc. Methods for diagnosing and treating such disorders using modulators of SCD1 activity are also provided. These disorders using modulators of SCD1 activity are also provided. These disorders using modulators of SCD1 activity diverse maladies, such as cancer and multiple sclerosis, non-insulindependent dispetes mellitus, hypertension, neurological diseases, eye diseases, and immune disorders as well as cholesterol disorders, eye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Identifying an agent for treating disorders related to serum levels of fatty acids and glycerols, by contacting screening assay with delta-9 stearoyl-CoA desaturase activity with compound and measuring the
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/bound_molety= "CCAAT enhancer binding protein-alpha
(C/EBP-alpha)"
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bound_moiety= "nuclear factor 1"
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/bound_moiety= "nuclear factor Y"
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/bound_moiety= "nuclear factor 1"
419. .437
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(WISC ) WISCONSIN ALUMNI RES I
(UYER-) UNIV BRITISH COLUMBIA.
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31-JUL-2000; 2000US-0221697P
15-DEC-2000; 2000US-0255771P.
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   1319 CCCAGCCCCAAACCGGGTCCCCAGCCCCTTCCAGAGAAAGCTCCCGACGCGGGGATGCC 1378
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/bound moiety= "sterol regulatory element binding protein
(SREBP)"
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                                     1379 GGGCAGAGCCCAGCGGCGGGGTGGAAGAGAAGCTGAGAAGGAAAACAGAGAGGGGAGGGGG
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/note= "polyunsaturated fatty acid response region"
116. .121
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102. .169
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131. .140
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151. .154
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Ruben SM;

acids encoding human immune/hematopoietic antigen polypeptides, for preventing, diagnosing and/or treating cancers and metastasis. useful for preventing, WPI; 2001-483426/52 Nucleic

Disclosure; SEQ ID NO 38065; 3071pp + Sequence Listing; English.

AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (1)
amino acid sequences given in AAM82170 to AAM91921. (1) have cytostatic
activity, and can be used in gene therapy and vaccine production. (1)
proteins and polymucleotides may be used in the prevention, diagnosis and
treatment of diseases associated with inappropriate (1) expression. For
example, they may be used to treat disorders associated with decreased
example, they may be used to treat disorders associated with decreased
that affect the activity of (1) by expressing inactive proteins or to
that affect the patients own production of (1). Additionally, (1)
supplement the patients own production of (1). Additionally, (1)
polymucleotides may be used to produce the secreted (1), by inserting the
nucleic acids into a host cell and culturing the cell to express the
protein. (1) proteins and polymucleotides may be used to prevent,
diagnose and treat immune/haematopoietic-related diseases, especially
cancers and cancer metastases of haematopoietic antigen genomic

6256 6514 6814 6815 gacaccraccaccacaccascraarrirragrarrirragiadadadadacaccirricacc 6874 5995 reaccircregrearcreccaccreaccreceaages 6635 reaggrircaccargriagccaggcragicririririririririririririririri 6875 Grériagéciaségarégreregarerecresadeseres 6934 16; 6575 AfAderieddarthachddraechaechaechaechaechartriteinachtaean 6634 546 649 884 AGGCCCAGCTAAGTTTTAAAAATGATTTTTGGTATAGAGGAGGTCTTGCTATGTTGCTC 943 247 486 763 823 9 sequences from the present invention. AAK54942 to AAK54950 and AAM82169 represent sequences used in the exemplification of the present invention 824 GCTCAAGCAATCCGCTGGCCTCAGCATCCTGAGTAGCTGGGACTACAGGCTTGTGCCACC 592 IAGGGICTCACTTTGTTACCCAGGCTGAAGGCAGTGGCATGGTGACAGCTGA--GCAGC 764 CIGITGCCCAGGCTGGAGTACAGTGGCGTAATAATAGCTCACTGCAGCCTCCCCTCCTGG 6515 riedcicaciacaaccicreccicredericaacietrereciecrederice 6695 gogagicicocreterececeadecidadeseceadeseceaterecegenteaceade 14 TITAAAICAIACAAITIAAIGGCIITIAGIAIAIICACAG-GIIGIGCAICCAI---CAC 6137 Tritada Gregora de Printa de La Composició de Contra de Contra Cont 6197 CATCAAGTTTAGAACATTTTTATAACCCCAGAAAGAAACCCTGTAGCCTTTAGCTGTCAC 6257 CTTCCAGTACCACTTTCTTCTCCCCTTTCCCCTAGGCTATCACTAATAAACTTTCTGT CTCTATAAATTTGCCAATTCTGGACATTTCATAAATGGAAGCAAACAACATGTGAGAC 5317 crararagarrrigcorarrcrigacarrircarararaaarggaarcararararargggcor TITGIGACTGGCTGTTTCACTTAGCATTCTATTTTTAAGGCTCA-TTATGTTACAGTAC 6377 irrcreaciaecircrircaciraecerearcarricaaecricarrarerrerere 307 TTAGCAGTACTTCATTCTTTTTTTTCTCAAATGGTATTCCACTGTGTGGGTATTCCATA 427 ATAGCTCACTGTAACCTCAAACTCCTGGGCTCAAGTGATCCTACTACCTCAGCCTCCAGA 650 CITGACTICCIGGGCICAAGIGAICCICCIGCCICAGCCICCCAAGIAGCIGGGACTACA 70 AATCCATTITAGAACAGTITIATTACTCCAAAAATAAACCCTGCATTCCTTAGCCATCAC 367 TCATATTATTAGAGACAGGITCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGCACAATC CCCCCA--ACATCCTCCATCCTCCTTCCAAGCCCTGGGCAACCACCAATCTACTTCTGT 9.8%; Score 386; DB 4; Length 8880; 54.7%; Pred. No. 2.1e-69; ative 0; Mismatches 850; Indels 138; Gaps Sequence 8880 BP; 2388 A; 1807 C; 1844 G; 2841 T; 0 U; 0 Other; 6437 GTATCAGTGTTTTGTTTTTTTTTGCAGACGGAGTTTTGCTCT Matches 1194; Conservative 547 TITAIGIALIC-Query Match Best Local Similarity 130 188 248 셤 ò 셤 g 88833 d q ð 셤 8 셤 δ à à 셤 à d ò 엄 ð d à d 8 g ð g à Ω ₹ 셤 ò à

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AGGCTGTATTTTATTGTTGAGACAAGGTCTCACTATGTTGCCATGATCCCCCCCACCTCC 1003
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                                                                                                                                             CCACITITICACCATTATGAATAATACTCCAGTGAATATTCATGT----ATACATTTGTGT
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The invention relates to genes and their expression profiles are used for: (a) screening modulators of precursor stem cell differentiation into osteoplasts, or bone tissue deposition; (b) diagnoshing abnormal deposition of bone tissue, abnormal rate of osteoplast formation osteoporosis; or (c) treating or monitoring treatment of the conditions cited in (b), or monitoring the progression of bone tissue deposition. Specific conditions include postmenopausal osteoporosis, glucocorticoid osteoporosis or male osteoporosis, osteopenia, osteodystrophy, druginally altered bone metabolism (e.g. idiopathic juvenile osteoporosis).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    skeletal disease limbed to breast cancer, mastocytosis, Fanconi syndrome or fibrous dysplasia. The present sequence is that of an osteoblast of differentiation associated coDNA marker of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Use of genes and their expression profiles associated with osteoblast differentiation for screening modulators bone formation, for diagnosing or treating e.g. osteoporosis, or as markers for the differentiation process.
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                                                                          2081 AGTGAAGCGAGATCACACCACTGCACTCCAGCCTGGGGGA-GAGAGCGAGACTTCCTCTC
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9.5%; Score 375.4; DB 6;
Best Local Similarity 55.4%; Pred. No. 5.5e-67;
Matches 1046; Conservative 0; Mismatches 726;
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Homo sapiens. WO200157182-A2.	SO XX	56933 TTTTCTCTTCTGTACTGGACCTTTGGAAGGAAGTCACTGTGTGCAGCCCACATTA 56874	gg ,
Human; immune; haematopoietic; cytostatic; gene therapy; vacc	\$ & & \$	56993 TGACTTTGATCACCTGACTGAGGTAAACTTTGCCAGACTTCTCCATTGTAAAGTTACTCT 56934	අුග
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06-NOV-2001 (first entry)	46×	57053 TTGGAGAAGAACAGAGGTCAGGTGCCATTCTTGCCACATCTTATGAAGGGTTCATGC 56994	qq
AAK69044;	YX AC	1203 CAGGGGAAGAAAACTTGGGAAAATGAAGCATGTTTAGAAATCAGCAAGAGTGCAGGG 1260	δλ
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	7. d	486 AGTAGGACTACGGCACACACACACACACTGCTAATTTTTTTT	à
56814 THTTTTTTTGAGAT	<b>업</b>	57871 CATAGCTCACTGCAGCCTTCAGGGCTCAAGCAATCCTCCTGCCTCCAG 57812	73. AG
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(HUMA-) HUMAN GENOME SCI INC.
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                                                                    31-JAN-2000; 2000US-0119065P.
24-FEB-2000; 2000US-01186464P.
02-MAR-2000; 2000US-01186464P.
02-MAR-2000; 2000US-01186350P.
16-MAR-2000; 2000US-01189874P.
16-MAR-2000; 2000US-01189874P.
17-MAR-2000; 2000US-01190076P.
18-ARR-2000; 2000US-0219880P.
19-MAY-2000; 2000US-0219880P.
19-MAY-2000; 2000US-0219880P.
19-MAY-2000; 2000US-0219880P.
11-UUL-2000; 2000US-0214880P.
11-UUL-2000; 2000US-0214880P.
11-UUL-2000; 2000US-0214880P.
11-UUL-2000; 2000US-0214880P.
11-UUL-2000; 2000US-0214880P.
11-UUL-2000; 2000US-0214880P.
11-UUL-2000; 2000US-022514P.
11-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
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14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-022514P.
14-AUG-2000; 2000US-0225144P.
01-SEP-2000; 2000US-0225144P.
01-SEP-2000; 2000US-0223144P.
01-SEP-2000; 2000US-0223144P.
01-SEP-2000; 2000US-0223144P.
01-SEP-2000; 2000US-0223144P.
01-SEP-2000; 2000US-0223144P.
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01-SEP-2000; 2000US-0223144P.
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01-SEP-2000; 2000US-0223144P.
01-SEP-2000; 2000US-0223309P.
01-SEP-2000; 2000US-023309P.
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01-SEP-2000; 2000US-023309P.
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1241 AAATCAGCAAGAGTGCAGGGGTTTTTTCGGAGTTTTTATTTTTATATTCTGTTGACAAATGTG 1300
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                                                                                                                                                                              AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) and a sequences given in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polywucleotides may be used in the prevention, diagnosis and treatment of diseases associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) polymucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the proteins and polymucleotides may be used to produce the secreted (I), by inserting the classons and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells AAK64703 cancers from the present invention. Affa9622 to AAK54950 and AAM82169 represent sequences used in the exemplification of the present invention
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                                                                                                                                        Disclosure; SEQ ID NO 23856; 3071pp + Sequence Listing; English.
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                                                                                                                            2000US-0225266P.
2000US-0225267P.
2000US-0225268P.
2000US-0225270P.
2000US-022547P.
2000US-0225757P.
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2000US-0217487P
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2000US-0226279P.
2000US-0226681P.
2000US-0226868P.
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2000US-0180628P.
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Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 2141; 1180pp; English
                                                                                                                                                                                                                                                    Ruben SM,
               2000US-0249216P.
2000US-0249217P.
2000US-0249218P.
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The present invention relates to the isolation of novel human enzyme polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidoreductases, transferases, hydrolases, lyases, comprise to range of isomerases or ligases. The sequences of the invention are useful in the disgrades including hyperproliferative disorders (e.g. a wide range of disgnosis, treatment, prevention and/or prognosis of a wide range of disgnoses, including hyperproliferative disorders (e.g. archritis), neurological disorders (e.g. Alzehmer's disease), metabolic disorders (e.g. phenylketonuria), inflammatory disorders (e.g. atherosclerosis), blood-related disorders (e.g. phenylketonuria), inflammatory disorders (e.g. atherosclerosis), blood-related disorders (e.g. infertility) and inflammatory disorders (e.g. inflammatory disorders (e.g. infertility) and infectious disorders (e.g. Inflammatory AAS41685-AAS42192 represent infention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly the mown WIPO at ftp.wipo.int/pub/published\_pct\_sequences

Sequence 9742 BP; 2382 A; 2564 C; 2516 G; 2280 T; 0 U; 0 Other;

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                                                                  Query Match 9.3%; Score 366.4; DB 4; Length 9742; Best Local Similarity 56.3%; Pred. No. 2.3e-65; Matches 1043; Conservative 0; Mismatches 631; Indels 178;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 84607 BP; 23055 A; 17765 C; 18980 G; 24744 T; 0 U; 63 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                  Use of a gene linked to the region of a chromosome associated with neuropsychiatric disorders, especially for diagnosis of bi-polar affective disorder and schizoaffective disorder manic type.
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88.6%; Pred. No. 4.8e-63;
ve 0; Mismatches 233;
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                                                                                                    99WO-US007401
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Matches 522; Conservative
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Best Local Similarity 55.2%;
Matches 1016; Conservative 0
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20447 ATCATACGGGCGGGGGGGGGGCTGGGCTGTAATCCCAGGACTTTGGGAGGCCGAGG
                               20507 TGGGCGGATCAC--GAGGTCAGGAGATCGAGACCATCCTGGCTAAAACGGTGAAACCCCG
                                                                                                                    1909 CATGTGGATCACCTGAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAAACCCCG
                                                 TCTCTACTAAAAATACAAAAATTAGCTAAGTGTGGGGGCGCATGCCTGTAATCCCAGCT
                                                              ACTIGGGAGGGIGAGGAGGAGAATITCTIGAACCCGGGAGGCAGAGGIIGCAGTGAAGC
                                                                                          20625 ACTCGGGAGGCTGAGGCAGGAGATGGCGTGAACCCGGGAGGCGGGAGCTTGCAGTGAGCC
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product= "Human glycogen synthase kinase 3 alpha"
                                                                                                                                                20745 AAAAAAAAAAAAAAAAAGGAATCATACTTGGAAAGGGAA 20785
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                                                                                                                                    AAAAACAAAAGAATTAAGCAAATTAGACATTGCAGAGAA
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115. .11786
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length targetted to a nucleic acid encoding glycogen synthase kinase 3 alpha. The antisense compound specifically hybridises with and inhibits the expression of glycogen synthase kinase 3 alpha. The antisense compound is useful for the treatment of a diseases associated with glycogen synthase kinase 3 alpha such as diabetes, a neurological disorder, a haematopoietic disorder, a hyperproliferative disorder or a developmental disorder. The antisense compounds may also be used prophylactically to prevent or delay infection, inflammation or tumour formation. The present genomic DNA sequence encodes human glycogen synthase kinase 3 alpha protein
                                                                                                                                                                                                   Antisense compound 8 to 30 nucleobases in length comprising a compound that is targeted to a nucleic acid molecule encoding glycogen synthase kinase 3 alpha, useful for the treatment of e.g. diabetes and hyperproliferative disorders.
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Pred. No. 6.4e-62;
0; Mismatches 742;
Wyatt JR;
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Monia BP, Mckay R, Butler MM,
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2000US-0233064P.
2000US-0233065P.
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Isolated nucleic acid molecule encoding a reproductive system antigen is used in preventing, treating or ameliorating a medical condition.
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   1501 TGATCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCCTGCTTCAGCCT
                         CGATCTCAGCTCACTGCAAACTCCACCTCCGGGGTTCAAGAATTCTCCTGCCTTAGCCT
                                                                CCCAAGTAGCTGGGACTACAGGCACTTCCCACCATGCCCAGCTGATTTTTGTATTTTTAG
                                                                                     CCTGAGTAGCTGGGATTACAGGCGTGCACTACCGTGCCTGGCTAATTTTATATTTTTAA
                                                                                                                                 TAGAGATGGGGATTTCACTTTGTTGGCCAAGCTCGTCTCAAACTTTTTGCTGTCATAATTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention provides the protein and coding sequences of 973 human testicular antigens, and fragments of their genomic sequences. The sequences can be used in the treatment of cardiovascular, urinary system, reproductive system, immune, respiratory, neurological and gastrointestinal disorders, infections, and particularly cancer, especially testicular cancers. The present sequence is a DNA encoding a
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reproductive system related antigen; reproductive system disorder;
1484 GCTGGAGGGCAGTGGTGTGATCTCAGCTCACTTGCAACTTTCGCCTCCCGGGTTCA 1538
                88 GCTGGAGGCCAGTGGTGTGTATCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTAA
                                                                                                                                                                                                                                  Human reproductive system related antigen DNA SEQ ID NO:
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                                                                                                                                                                                                21-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                 02-AUG-2001
                                                                                                                                                                AAL05121;
                                                                                                                                                                                                                                                                         Human;
                                                                                         RESULT 13
                                                                                                            AAL0512
                                                                                                                                                                1303
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to an isolated nucleic acid molecule (I) comprising a nuclectide sequence given in Tables 1-9 (ABV00010-ABV62213) of the specification or its complement. (I) is useful for: (a) assessing whether patient is afflicted with prostate cancer; (b) monitoring the progression of prostate cancer in a patient; (c) assessing the efficacy of a therapy for inhibiting prostate cancer in a patient; (d) assessing the efficacy of a therapy for inhibiting prostate cancer in a patient; (e) selecting a composition for inhibiting prostate cancer in a patient; (f) assessing the prostate call carcinogenic potential of a compound; (g) determining whether prostate cancer has metastasized in a patient; (h) assessing the aggressiveness or indolence of prostate cancer in a patient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITITIGCCAGGCAGGTTCAGGGGAAGAAACTIGGGAAAATGAAGCATGTTTAGAAA 329
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel isolated nucleic acid molecule associated with cancerous state of prostate cells and correlating with presence of prostate cancer, useful for detecting presence of prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAGCAAGAGTGCCAGGGGTTTTTTCGGAGTTTTTATTTTATATTCTGTTGACAAATGTGCAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 396 BP; 125 A; 96 C; 57 G; 118 T; 0 U; 0 Other;
                                     Human prostate expression marker cDNA 52496.
                                                                                                                                                                                                                                                                                                                                                                                                 MILLENNIUM PREDICTIVE MEDICINE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 10183; 11750pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                    Schlegel R, Endege WO, Monahan JE;
                                                                                                                                                                                                                                                                                    16-WAR-2000; 2000US-0189862P.
25-WAY-2000; 2000US-0207454P.
09-UUN-2000; 2000US-021314P.
18-UUL-2000; 2000US-0219007P.
13-DEC-2000; 2000US-0255281P.
                                                                                                                                                                                                                                       20-FEB-2001; 2001WO-US005171
   (first entry)
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     17-SEP-2002
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2000US-0249245P.
2000US-0249264P.
2000US-0231244P.
2000US-02314113P.
2000US-0231414P.
2000US-0232080P.
200US-0232081P.
200US-0231968P.
2000US-0232397P.
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2000US-0232400P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated nucleic acid molecule encoding a reproductive system antigen is used in preventing, treating or ameliorating a medical condition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention provides the protein and coding sequences of a number of human reproductive system related antigens. These can be used in the prevention and treatment of reproductive system disorders, including cancer. The present sequence is a genomic sequence encoding a protein of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1861 AGGCGTGGTCGTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    used in preventing, treating or ameliorating a medical
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17-NOV-2000; 2000US-0249265P.
17-NOV-2000; 2000US-0249297P.
17-NOV-2000; 2000US-0249309P.
17-NOV-2000; 2000US-0249300P.
01-DEC-2000; 2000US-0250391P.
05-DEC-2000; 2000US-0250391P.
05-DEC-2000; 2000US-025198P.
05-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-025198P.
06-DEC-2000; 2000US-025198P.
08-DEC-2000; 2000US-0251866P.
08-DEC-2000; 2000US-0251869P.
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                                                                                                                                                                                                                                                                  Human; testicular antigen; testes; cancer; metastasis; immune disorder; reproductive system disorder; urinary system disorder; gene therapy; cardiovascular disorder; respiratory disorder; neurological disorder; gastrointestinal disease; infection; cytostatic; gene; ds.
                                                                                                                                                                                                         4153 ATAC-AAAAATAAGCCACGTGTGGGGGGGGCATGCCTATAGTCCCCACTAGTTGAGAGGCT
                                                                                          ATACAAAAATTAGCTAAGTGTGGCGCGTTGCCTGTAATCCCAGCTACTTGGGAGGGT
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04-FEB-2000; 2000US-0184664P.
02-MAR-2000; 2000US-0184664P.
16-MAR-2000; 2000US-0186350P.
16-MAR-2000; 2000US-0186350P.
16-MAR-2000; 2000US-0189374P.
19-MAY-2000; 2000US-0199123P.
19-MAY-2000; 2000US-020515P.
28-JUN-2000; 2000US-0205467P.
28-JUN-2000; 2000US-021513P.
11-JUL-2000; 2000US-021513P.
11-JUL-2000; 2000US-021513P.
11-JUL-2000; 2000US-0217487P.
11-JUL-2000; 2000US-0218290P.
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26-JUL-2000; 2000US-0218290P.
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TACAGATGGGGTTTCACCATGTTGGTCAGGCTGGTCTCGAACTCCTGACTTCATGATCCG 3862
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                                                                                                                                                                                                                                                                  1861 AGGCGTGGTGGCTCTGTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCAC
                                                       AATCCAAATCAGTGTGTTTGACCACTGTCACTTGAGAACCACAGTGTGACCAGGGC
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AAS42014 standard; DNA; 6437 BP.
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16-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention provides the protein and coding sequences of 973 miman testicular antigens, and fragments of their genomic sequences. The sequences can be used in the treatment of cardiovascular, urinary system, reproductive system, immune, respiratory, neurological and agastrointestinal disorders, infections, and particularly cancer, especially testicular cancers. The present sequence is a DNA encoding a protein fragment of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic acids encoding 973 human testicular antigen polypeptides, useful for preventing, diagnosing and/or treating testicular cancer.
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07-JUN-2000; 2000US-0214886P.
28-JUN-2000; 2000US-0214886P.
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07-JUL-2000; 2000US-0216880P.
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11-JUL-2000; 2000US-0217487P.
11-JUL-2000; 2000US-0217487P.
11-JUL-2000; 2000US-0217487P.
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14-JUL-2000; 2000US-02254518P.
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20--CCT-2000; 2000US-0241786FP.
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08-NOV-2000; 2000US-0246477P.
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08-NOV-2000; 2000US-0246278P.
08-NOV-2000; 2000US-0246524P.
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(HUMA-) HUMAN GENOME SCI INC

Rosen CA, Barash SC, Ruben SM;

WPI; 2001-465566/50

Novel polypeptides and polynucleotides useful for diagnosing, preventing, treating neural, immune system, muscular, reproductive, pulmonary, cardiovascular, renal, proliferative disorders and cancerous diseases.

Disclosure, SEQ ID NO 2140; 1180pp; English.

The present invention relates to the isolation of novel human enzyme polypeptides (AAU22915-AAU23814), and the CDNA and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidocateductases, transferases, hydrolases, lyases, isomerases or ligases. The sequences of the invention are useful in the

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diagnosis, treatment, prevention and/or prognosis of a wide range or disorders including hyperproliferative disorders (e.g. cancer), immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g. archivitation), neurological disorders (e.g. AIDS) autoimmune disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma), cardiovascular disorders (e.g. atherosclerosis), blood-related disorders (e.g. hemophilia), reproductive disorders (e.g. infertility) and infectious disorders (e.g. Influenza). The polymucleotides of the invention can also be used in gene therapy. AAStleS-AASA2122 represent bNA sequences encoding for the novel human enzyme polypeptides of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
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completed: May 12, 2004, 19:47:11

Search

Job time : 2140.36 secs

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ANTISENSE MODULATION OF GLYCOGEN SYNTHASE KINASE 3 ALPHA EXPI
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Pred. No. 4.9e-77;
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                             US-09-345-882-1
US-09-488-856A-10
US-08-724-394A-21
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US-09-818-512-3
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APPLICANT: Robert McKay
APPLICANT: Madeline M. Butler
APPLICANT: Jacqueline Wyatt
TITLE OF INVENTION: ANTISENSE MODULATION
FILE REFERENCE: RTS-0115
CURRENT APPLICATION NUMBER: US/09/488,856A
CURRENT FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 88
                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                      US-09-488-856A-10
; Sequence 10, Application US/09488856A
; Patent No. 6316259
; GENERAL INFORMATION:
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                   GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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à r	Asakasicitatisiisetaisateeteeteetitetaaritetti ju	qa	525
Q C	TITAAGACAGAATCICGITCIGICACIAAGGCIGGAGIGCAGIGGIGIGAIGICGGCICA 425	δy	205
λ, i	AICTTATCHGTTCATTAGTCAGTTGACAGTTTAGGTTGTTTCCACTTTTTGACCATT	q	531
Q <sub>Q</sub>		ò	211
کا <del>ا</del>	1080 AIGAANAATACTCCAGTGAATATITCAFGTATACATITGTGGGGCATATGTTTTCATTC 1139 4315 TOTTTCATTCACTAGTGAATATTCATGTGTGGGCCATATGTTTTCATTC 1139	qa	537
3 8	では、1911年によっては、1911年には、1911年によっては、1911年によっには、1911年によっては、1911年によっには、1911年によっては、1911年によっには、1911年によっには、1911年によっには、1911年によっては	F.IIISB8	0
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3		; Patent No.	T NO.
čo i	GITCAGGGGAAGAAAA	; GENERAL IN ; APPLICANT mimit CENT	APPLICANT
an		; TITLE	
ΟY	1247 GCAAGAGTGCAGGGGTTTTTCGGAGTTTTTATTTTTGTGTTGACAAATGTGCAGTTT 1306	, TITLE	TITLE OF PILE REFE
Db	4495 GCCACCATGCCCAGCTGTTTTTTTTTTTTTTTTTTTTAAGGCTGGGTATGGTAGCT 4552	CORR	CURRENT A
λō	1307 GATGAAGATACAAGTTATACTAAGTGAGAAATTAAGGCTGGAATAGGGCGTTCA 1366	; NUMBER OF SOFTWARE:	ER OF
QQ	4553 CATGCCTGTAATCCTTGAACTTGGAGAGGCC-CGAGGCAGGAGGATTGCCTGAGACTAGGA 4611		D NO
Š	GAGTAAAATCATGAAGCACTTTGAATACCAAAATTAAGGAGCTTGGCTGTAAACAAAATA	TYP	TYPE: DN
DP	4612 GTTCAAAACCAACCTGGCCAACATAGCCAGGTTCTTTTAAAAATAATAATAATAATAAAT 4671		FEATURE: NAME/KEY
8 8	1427 ATAAAAAATCACAATTTTTTTTTTTTTTTTTGAGAAAGAGTCTTGCTCTTTCACCCTGGCT 1486 4272 mmmynmmynmmynmynmynmynmynmynmynmynmynmyn	; 10C ; OTH IIS-09-7	LOCATION OTHER IN
q	IIIMICIMIIMIIMIIMIIMIMIMIMIMIMIMIMIMIMI		

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BEASLEY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5318
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GGAGGGCAGTGGTGATCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTC
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                   rcaagaccarccragcraacgragraaaaaccccarcracraaaaarac-aaaaarraa
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                                                                     TCCTGCTTCAGCCTCCCAAGTAGCTGGGACTACAGGCACTTCCCACCATGCCCAGCTGA-
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APPLICATION NUMBER: US/09/797,906
FILING DATE: 201-03-05
FILING DATE: 5
FREUENG TONOS: 5
FREUENG FOR Windows Version 4.0
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3, Application US/09797906
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NFORMATION:
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N: (1) ... (84495)
NFORMATION: n = A,T,C or
06-3
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1456 TCCCAGCCAGGTGCGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGATCGAAACGGG 1397
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                                                                                                                                        1973 TACTAAAATACAAAAA-TTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCAGCTACT
                                                 1913 IGGAICACCIGAGGICAGGAGIICAAAACCAGCCIGGCCAACAIGGIGAAACCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSER: KOHN & ASSOCIATES
STREET: 30500 No. 6025183thwestern Highway, Suite 410
CITY: Farmington Hills
STATE: Michigan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Soreg, Hermona
APPLICANT: Zakut, Haim
APPLICANT: Sakut, Haim
APPLICANT: Shani, Moshe
TITLE OF INVENTION: TRANSGENIC ANIMAL ASSAY SYSTEM
TITLE OF INVENTION: ANII-CHOLINESTERASE SUBSTRACES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Montgomery, Ilene N.
REGISTRATION NUMBER: 38,972
REFERENCE/DOCKET NUMBER: 2391.00066
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/814,099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 4834
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        other nucleic acid
/desc = "Cosmid inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 7, Application US/08814095
Patent No. 6025183
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (248) 539-5050
TELEFAX: (248) 539-5055
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 35060 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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CLASSIFICATION: 800
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CHROMOSOME/SEGMENT:
FEATURE:
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DESCRIPTION:
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US-08-814-095-7
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  OPERATING SYSTEM: DOS SOFTWARE: FastSEQ for Windows Version 2.0
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                                       CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/99/108,006C
FILING DATE: 30-Jun-1992
CLASSIFICATION: cUnknown
PRIOR APPLICATION NUMBER: 60/054,288
FILING DATE: 30-APR-1997
APPLICATION NUMBER: 60/054,837
FILING DATE: 05-AUG-1997
APPLICATION NUMBER: 60/064,996
FILING DATE: 10-NOV-1997
APPLICATION NUMBER: 60/074,497
FILING DATE: 12-FEB-1998
APPLICATION NUMBER: POT US 98/08834
FILING DATE: 30-APR-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Friebel, Thomas
REGISTRATION NUMBER: 29258
REFERENCE/DOCKET NUMBER: 7991-015-999
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-504-4444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COCATION: 71...114
COTHER INFORMATION: Exon 1
SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-108-006C-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 3805 base pairs
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TELEX: <Unknown>
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STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 3:
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NAME/KEY: exon
LOCATION: compl
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LOCATION: compl
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NAME/KEY: exon
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LOCATION: compl
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LOCATION: 24090..25177

LOCATION: METHOD: experimental
OTHER INFORMATION: /function= "(translation start:
OTHER INFORMATION: /function= "(translation start:
OTHER INFORMATION: /function= "ACHE"
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /number= 2
FRATURE:
NAME/KEY: exon
LOCATION: 25524..26009
LDENTIFICATION METHOD: experimental
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OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /gene= "ACHE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: promoter
LOCATION: 4089..22464
OTHER INFORMATION: /function= "ACHE Promotor"
OTHER INFORMATION: /standard_name= "ACHE Promotor"
                                                                              FEATURE:
NAME/KEY: excn
LOCATION: 22465.22537
OTHER INFORMATION: /function= "non-translated"
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /mumber= 1
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: terminator
LOCATION: 27385..27387
FEATURE:
NAME/KEY: exon
LOCATION: 28008..28129
IDBNTIFICATION NETHOO: experimental
OTHER INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /number= 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
NAME/TEXT: exon
LOCATION: 27005..27274
IDENTIFICATION METHOD: experimental
OTHEN INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /gene= "ACHE"
OTHER INFORMATION: /number= 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
NAME. SECTION
INCATION: 27255..28007
IDENTIFICATION METHOD: experimental
OTHER INFORMATION: /evidence= EXPERIMENTAL
OTHER INFORMATION: /evidence= TAPERIMENTAL
OTHER INFORMATION: /mumber= 5
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NAME/KEY: exon
LOCATION: complement (33779..33963)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 3
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LOCATION: complement (34092..34358)
OCTHER INFORMATION: /gens= "AR"
OTHER INFORMATION: /number= 2
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/number= 1
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LOCATION: 28129..28131
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OTHER INFORMATION:
OTHER INFORMATION:
FEATURE:
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LOCATION: comp.
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9802 ICTITITICITITICAGA GEGGGGCTCCCTCTATCGCCCCAGGCTGGAGTGCAGTGCCACAAT 9861
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
8.1%; Score 321; DB 3; Length 35060;
Best Local Similarity 68.8%; Pred. No. 1.3e-69;
Matches 511; Conservative 0; Mismatches 205; Indels 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , LUCATION: complement (29664..29856); OTHER INFORMATION: /gene= "ARS"; OTHER INFORMATION: /number= 16
US-08-814-095-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: exon
LOCATION: complement (31363..31534)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
NAME/KEY: exon
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OTHER INFORMATION: /number= 9
NAME/KEY: exon
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NAME/KEY: exon
LOCATION: complement (32386..32468)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 8
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LOCATION: complement (31131..31284)
OCHER INFORMATION: /gene="AR"
OTHER INFORMATION: /number=11
                                                                                                                              NAME/KEY: exon
LOCATION: complement (32959..33094)
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OTHER INFORMATION: /number= 6
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NAME/KEY: exon
LOCATION: complement (32569..32628)
OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 7
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 12
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 13
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 14
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OTHER INFORMATION: /gene= "AR"
OTHER INFORMATION: /number= 15
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NAME/KEY: exon:intron junction
LOCATION: (348578)...(348579)
OTHER INFORMATION: exon 10:intron 10
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LOCATION: (22036)...(220459)
OTHER INPORMATION: n = A,T,C or G
NAME/KEY: misc_feature
LOCATION: (222717)...(222816)
OTHER INFORMATION: n = A,T,C or G
NAME/KEY: misc_feature
LOCATION: (2229816)
COTHER INFORMATION: n = A,T,C or G
OTHER INFORMATION: n = A,T,C or G
OTHER INFORMATION: n = A,T,C or G
                                                                                                    NAME/KEY: unsure
LOCATION: 151967
OTHER INFORMATION: unknown
NAME/KEY: misc feature
LOCATION: (151967)...(1542066)
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (230155)
OTHER INFORMATION: n = A,T,C or G
OTHER KEY: misc feature
LOCATION: (232299)...(232398)
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: unsure
LOCATION: 202703
OTHER INFORMATION: unknown
NAME/KEY: misc_feature
LOCATION: (202771)...(202870)
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (186224)...(186323)
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (227487)...(227586)
OTHER INFORMATION: n = A,T,C or G
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LOCATION: (299248)...(299249)
OTHER INFORMATION: exon 9:intron
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OTHER INFORMATION: exon 5:intron
                                                                                                                                                                                                                                                                        NAME/KEY: unsure
LOCATION: 154217
OTHER INFORMATION: unknown
NAME/KEY: misc feature
LOCATION: (164037)...(164136)
OTHER INFORMATION: n = A,T,C or
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LOCATION: (206246)...(215602)
OTHER INFORMATION: n = A,T,C or
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LOCATION: (174657)...(174756)
OTHER INFORMATION: n = A,T,C or
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LOCATION: (195242)...(195341)
OTHER INFORMATION: n = A,T,C or
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LOCATION: (218126)...(218225)
OTHER INFORMATION: n = A,T,C or
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OTHER INFORMATION: n = A,T,C or
NAME/KEY: misc.feature.
LOCATION: (238789)...(248788)
OTHER INFORMATION: n = A,T,C or
  = A, T, C or
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LOCATION: (151129)...(151130)
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INFORMATION: exon 1C
                                                                          INFORMATION: unknown
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  DITHER INFORMATION:
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APPLICANT: Kenneth W. Dobie
APPLICANT: Mark Noch
TITLE OF INVENTION: ANTISENSE MODULATION OF ESTROGEN RECEPTOR ALPHA EXPRESSION
FILE REFERENCE: RTS-0340
CURRENT APPLICATION NUMBER: US/10/027,983
CURRENT FILING DATE: 2001-12-18
NUMBER OF SEQ ID NOS: 98
SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10461 TAGTGAGCTGAGATTGCACCATGGCACTCCATCCTGGGCCACAGGAGAAACTCCGTCT 10520
                                                                                                                                                                                                                               9982 GACAGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAAATCCTGGCCTCAAGTGATCTGCC 10041
                                                                                                                                                                                                                                                                                                                                                        10162 AGTAATATGTGCATCTTGGGTGCAAGCGTCTAAATTGCTAAACCTGCATCTGCAGTTTTA 10221
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1786 -----CAGTGTGACCAGGGCCTCAGGAGTAGGGGGATCTCTGCTCGAAAGAGAAATAG 1839
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                                                                                                                                                                                             GAIGGGAITICACITIGIIGGCCAAGCIGGICICAAACITITIGCIGICAIAAIIGIIGI 1684
                                                                                                                                                                                                                                                                                                       1685 AAC-----TATTGTTCCTTTTGCTGAGGTAGGCCCCCCAGACCAAAAATA 1732
9862 CTGGGCTCACTGCAACCTCTGCCACCCAGGTTCAAGCAATTTTCCTGTGTCAGCCCCA 9921
                                                                                   9922 AATAGCTGGGATTACCAGTGCCCACCACAATGCCCAGCTAATTTTTATAATTTCAGTAGA 9981
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NAME/KEY: unsure
LOCATION: 137740
OTHER INFORMATION: unknown
NAME/KEY: unsure
LOCATION: 137742
OTHER INFORMATION: unknown
NAME/KEY: misc_feature
LOCATION: (138122)...(138221)
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                                                                                                                                                                                                                                               CTTAGGCTGGAGCGCAGTGGCGCAATCTTGGCTCACTGCAACCTCCACCTCCTGGGTTCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67265 ACCTATTTATTTGTCTGTCTCTACACTAGAATATAAGCTCTATGAGGGTAGACTTCTT
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                                                                                                                                                                     1419 ACAAAATAAAAAAATCACAAATTTTTTTTTTTTTTTGAGAAAGAGTCTTGCA
                                                                                                                                                                                                                             CCCTGGCTGGAGGCCAGTGGTGTGATCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCA
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                                                                                                              Length 392000;
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                                                                                                                                            43;
                                                                                                              Score 319.8; DB 4; Length
Pred. No. 9.6e-69;
0; Mismatches 217; Indels
                                                                       12
; NAME/KEY: intron; 1.05ATON: (34859)...(381838); COTHER INFORMATION: intron 10; NAME/KEY: Intron:exon junction; ICCATION: (386185)...(386186); OTHER INFORMATION: intron 11:exon US-10-027-983-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1815 TGATCTCTGCTCGAAAGAG----
                                                                                                               Query Match 8.1%;
Best Local Similarity 67.2%;
Matches 533; Conservative
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US-09-813-817-3/c; Sequence 3, Application US/09813817; Patent No. 6340583

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TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CLOO1178
CURRENT APPLICATION NUMBER: US/09/813,817
CURRENT FILING DATE: 2001-03-22
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FREESEQ for Windows Version 4.0
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Pred. No. 2.2e-68;
0; Mismatches 264;
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66.7%;
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SENERAL INFORMATION
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LENGTH: 59065
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ORGANISM: Human
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US-09-804-471A-3
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                                                                                                                                                                                             GENERAL INFORMATION:

APPLICANT: YAN, Chunhua et al.

TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES

TITLE OF INVENTION: THEREOF

FILE REFERENCE: CLOO178BIV

CURRENT APPLICATION NUMBER: US/09/978,197

PRIOR APPLICATION NUMBER: 09/813,817

PRIOR PILING DATE: 2001-03-22
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
                                                                                                                                                                Sequence 3, Application US/09978197
Patent No. 6403353
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                                                                                  11629 A 11629
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; ORGANISM: Human
US-09-978-197-3
                                                                                                                                 RESULT 7
US-09-978-197-3/c
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12675 NNTCTCCCCCTTTCTCCCAAAATATGGCAGACTCTTCTTCTCCCCTAGTCATTCTCATATA 126734
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APPLICANT: WESSTER, MAXION et al
APPLICANT: WESSTER, MAXION et al
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REPERENCE: CLOOIL64
CURRENT APPLICATION NUMBER: US/09/804,471A
CURRENT FILLING DATE: 2001-03-13
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1929 AGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATACAAAA 1988
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                                                                     11867 AGGAGTTCGAGACTAGCTTGGCCAACATGGCAAAACCCCATCTCTATAAAAATA-TAAA
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Query Match
7.9%; Score 312.4; DB 4;
Bef Local Similarity 61.7%; Pred. No. 44.4e-67;
Matches 490; Conservative 0; Mismatches 298;
Matches 490; Conservative 0; Mismatches 298.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Application US/09804471A Patent No. 6479269
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; LOCATION: (1)...(174493)
; OTHER INFORMATION: n = A,T,C or G
US-09-804-471A-3
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GENERAL INFORMATION:

APPLICANT: BOUGUELETC, Lydie

APPLICANT: BOUGUELETC, Lydie

APPLICANT: BOUGUELETC, Lydie

TITLE OF INVENTION: AND POLYMORPHIC MARKERS ASSOCIATED WITH SAID NUCLEIC ACID.

FILE REPERBUCE: GENSET. 031A

CURRENT APPLICATION NUMBER: US/09/345,882

CURRENT APPLICATION NUMBER: US 60/091,315

PRIOR APPLICATION NUMBER: US 60/091,315

PRIOR APPLICATION NUMBER: US 60/111,909

PRIOR APPLICATION NUMBER: US 60/111,909

PRIOR APPLICATION NUMBER: US 60/111,909

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Patent No. 6399373
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LOCATION: 72794
OTHER INFORMATION: 5-124-273
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APPLICANT: WEBSTER, Marion et al
APPLICANT: WEBSTER, ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MCLECULES ENCODING HUMAN KINASE PROTEINS, AND USES
TITLE OF INVENTION: THEREOF
FILE REPRENEUE: CLOOLIG-641DV
CURRENT APPLICATION NUMBER: US/10/238,709
CURRENT PILING DATE: 2002-09-11
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  CTCAGGAGTAGAGGTGATCTCTGCTCGAAAGAGAAATAGAATGAAAATATTCTCCGGGCC
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 3
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Patent No. 6680188
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; LOCATION: (1)...(174493);
; OTHER INFORMATION: n = A,T,C or US-10-238-709-3
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ORGANISM: Human
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LOCATION: 146345
OTHER INFORMATION: 5-143-101 : polymorphic base A
FEATURE:
LOCATION: 150329
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DIHER INFORMATION: 5-140-120 : PEATURE:
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OCATION: 108149
THER INFORMATION: 5-135-198
                                                                                                                                       NAME/KEY: allele
LOCATION: 97122
OTHER INFORMATION: 99-1442-224
                                                  LOCATION: 90842
OOTHER INFORMATION: 99-1437-325
FERAURE: allele
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STHER INFORMATION: 5-130-276
FEATURE:
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OCATION: 106940
THER INFORMATION: 5-133-375
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LOCATION: 134374
DTHER INFORMATION: 5-140-361
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AME/KEY: allele
ACCATION: 108106
THER INFORMATION: 5-135-155
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NAME/KEY: allele
LOCATION: 108308
OTHER INFORMATION: 5-135-357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: allele
LOCATION: 108471
VHER INFORMATION: 5-136-174
LOCATION: 88073
OTHER INFORMATION: 5-127-261
FEATURE:
                                                                                                                                                                                                                                           NAME/KEY: allele
LOCATION: 99098
DIHER INFORMATION: 5-130-257
                                                                                                                                                                                                       CCATION: 97152
THER INFORMATION: 5-129-144
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                                                                                                    LOCATION: 93714
OTHER INFORMATION: 5-128-60
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NAME/KEY: allele
NCATION: 146328
OTHER INFORMATION: 5-143-84
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LOCATION: 134362
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                AME/KEY: allele
OCATION: 103806
THER INFORMATION:
                                                                                                                                                                              FEATURE:
NAME/KEY: allele
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JAME/KEY: allele
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NAME/KEY: allele
LOCATION: 90819..90865
OTHER INFORMATION: complement polymorphic fragment 99-1437-325 SEQ ID49
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OTHER INFORMATION: complement polymorphic fragment 99-1437-325 SEQ ID70
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LOCATION: 97099..97145
DTHER INFORMATION: polymorphic fragment 99-1442-224 SEQ ID50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: 97099..97145
JTHER INFORMATION: polymorphic fragment 99-1442-224 SEQ ID71
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LOCATION: 97130..97177
LOCATION: 97130..97177
LOCATION: POLYMORPHIC fragment 5-129-144 SEQ ID54
FEATURE: NAME/KEY: allele
LOCATION: 99075..99121
OTHER INFORMATION: polymorphic fragment 5-130-257 SEQ ID34
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LOCATION: 99075..99121
OTHER INFORMATION: polymorphic fragment 5-130-257 SEQ ID55
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NAME/KEY: allele
LOCATION: 99094..99140
OTHER INFORMATION: polymorphic fragment 5-130-276 SEQ ID35
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LOCATION: 99094..99140
OTHER INFORMATION: polymorphic fragment 5-130-276 SEQ ID56
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LOCATION: 103783..103828
OTHER INFORMATION: polymorphic fragment 5-131-395 SEQ ID36
                                                                                                                                                                                      LOCATION: 72771..72817
OTHER INFORMATION: polymorphic fragment 5-124-273 SEQ ID30
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JTHER INFORMATION: polymorphic fragment 5-129-144 SEQ ID33
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                                                                                                                                                                                                                                                                                             LOCATION: 72771..72817
OTHER INFORMATION: polymorphic fragment 5-124-273 SEQ ID51
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NAME/KEY: allele
LOCATION: 88050..88096
OTHER INFORMATION: polymorphic fragment 5-127-261 SEQ ID31
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OTHER INFORMATION: polymorphic fragment 5-127-261 SEQ ID52
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LOCATION: 93690..93736
OTHER INFORMATION: polymorphic fragment 5-128-60 SEQ ID32
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LOCATION: 93690..93736
DIHER INFORMATION: polymorphic fragment 5-128-60 SEQ ID53
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                                                                                                           base
     : polymorphic base
                                                                                     LOCATION: 160031
OTHER INFORMATION: 5-148-352 : polymorphic
OTHER INFORMATION: 5-145-24
FEATURE:
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10200 CCCCAAGTGCTGGGATTACAGACATGAGCCACTGCGCTGGGCCCCATGCGCCTCCATTTT 10259
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                                                                                                                                                                                                    1862 GGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCACC 1921
                                                                                                                                          GENERAL INFORMATION:
APPLICANT: LI, Jiayin et al
APPLICANT: LI, Jiayin et al
TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND
TITLE OF INVENTION: THEREOF
FILE REFERENCE: CL000851
CURRENT APPLICATION NUMBER: US/09/735,934A
CURRENT APPLICATION NUMBER: 2000-12-14
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                 2052 ATTICITIGNACCCGGGAGGCAGAGGTTGCAGTGAAGCGAGATCACACCACTGCACTCCAG
                                                                     86253 TAGCCAGGCATGGTGGCGGGGGCTGTAATCCCAGCTACTCTGGAGGCTGAGGCAGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1442 TITITITITITITITICAGAAAGAGTCTTGCTCTTTCACCCTGGAGGGCAGTGGTGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .0320 GAGACAGCATCTCTAGCTCCGTGGGTGCCACGCTTGTACAGAAATCCTGATTCTGGGCCA
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Pred. No. 4.8e-66;
0; Mismatches 233; Indels 31;
FEATURE:
NAME/KEX: allele
LOCATION: 103783..103828
OTHER INFORMATION: polymorphic fragment 5-131-395 SEQ ID57
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                                                                                                                                                       ID37
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OTHER INFORMATION: polymorphic fragment 5-135-198 SEQ ID60
FRATURE:
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                                                                                  FEATURE:
NAME/KEY: allele
LOCATION: 106918..106966
OTHER INFORMATION: polymorphic fragment 5-133-375
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NORM/KRN: allele
NOCATION: 106918..106966
OTHER INFORMATION: polymorphic fragment 5-133-375
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NAME/KEY: allele
LOCATION: 108084..108130
OTHER INFORMATION: polymorphic fragment 5-135-155
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LOCATION: 108127..108177
CTHER INFORMATION: polymorphic fragment 5-135-198
FEATURE:
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LOCATION: 108084..108130
OTHER INFORMATION: polymorphic
FEATURE:
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Best Local Similarity 66.7%;
Matches 529; Conservative
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ORGANISM: Homo
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US-09-851-896-3/c
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APPLICANT: LI, Jiayin et al

TITLE OF INVENTION: SOCIATED HUMAN KINASE PROTEINS, NUCLEIC

TITLE OF INVENTION: ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND ITILE OF INVENTION: THERROR

FILE REFERENCE: CLOOGSIDIV

CURRENT PAPLICATION NUMBER: US/10/060,332

CURRENT FILING DATE: 2002-02-01

NUMBER OF SEQ ID NOS: 4

SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                              AGGCAGGAGAATTTCTTGAACCCG-GGAGGCAGAGGTTGCAGTGAAGCGAGATCACACA
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                                                               TACAAAAATTAGCTAAGTGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGGTG
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7.8%; Score 307.6; DB 4; Length
Best Local Similarity 67.6%; Pred. No. 3.4e-66;
Matches 491; Conservative 0; Mismatches 229; Indels
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Patent No. 6528294
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ORGANISM: Homo sapiens
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LENGTH: 43950
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APPLICANT: Susan M. Freier
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GGCGTGGTGGCTCATGCCTGTAATCCCAGCACTT
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32440 AATTITGTATTITAGTGGAGAAGGGGTTTCACCATGTTGGCCAGGCTGGTCTCGAACT 32381  1092 CCAGTGAATATTCATGTATACATTTGTGTGGGGCATATCTTTTCATTT 1138	TGATACAGGGAAAAAAGGAAGAAAAAAAAAAAAAAAAAA	1244 TCAGCAAGAGTGCAGGGTTTTTCGGAGTTTTATATTTGTTGACAAATGTGCAG 1303 	1304 TITGATGAAGATACAAGITATACTAAGIGAGAAGTGAGAATTAAGGCTGGAATAGGGCGT 1363 32140 CAGGAAGGAAGGAACAGAAGIGAACGAGACTGCTTACCTACAAGGGGGTAGGGGAAGA 32083	1364 TCAGAGTAAAATCATGAAGCACTTTGAATACCAAAATTAAGGAGCTTGGCTGTAAACAA 1423 32082 AAACAGGCAAAAGGGAGTTACTGTATTGTATAGTTCTGACTTTTGGAGCTACATTAA 32023	1424 ATAATAAAAATCACAATTTTTTTTTTTTTTTTTGAGAAGGTCTTGCTCTTTGACCTG 1483 32022 TGTCTTTATTTTTTTTATTATTATTATTTTTTAGACAGTCTCACTCTGT-TGCCAG 31964	1484 GCDGGAGGCAGTGGTGAGTCTCAGCTCACGCAACTTTGGCCTCCC-GGGTTCAAGCA 1542	1543 AITCICCHGCTICAGCCICCCAAGTAGCTGGGACTACAGGCACTICCCACCATGCCCAGC 1602	1603 TGAITITIGIALITITAGIAGAGAIGGGAITICACTITIGITGGCCAAGCTGGTCTCAAAC 1662 	1663 T-TTTTGCTGTGATATTGTTGTAGTATTGTTCCTTTTGCTGAGGTAGGCCCCCAGAC 1721	1722 CAAAAAAATGAATCTTAGAATCCAAATCAGTGTTGGTTTGACCACTGTCACTTGAGA 1781 1724 GACACTGTGCCCAGCCACGTTGTTTCAAACATTCAAAACAACAACAATAACAAAAGG 31665	1782 ACCACAGTGTGACCAGGGCCTCAGGAGTAGAGGTGATCTCTGCTGGAAAGGAAATAGAA 1841 	1842 TGAAAATATTCTCCGGGCCAGGCGTGGTCATGCCTGTAATCCCAGCACTTTGGGAG 1901	1902 GCCAAGGCAIGIGGAICACCIGAGGICAGGAGTICAAAACCAGCCIGGCCAACAIGGIGA 1961 	1962 AACCCCGTCTCTACTAAAAATACAAAAATTAGCTAAGTGTGGGGGCATGCCTGTAAT 2021 	2022 CCCAGCTACTTGGGAGGGTGAGGAATTTCTTGAACCCGGGAGGCAGAGGTTGCA 2081 31429 CCCAGCTACTCGGGAGGCTGAGGCAGGAGATGGCGTGAACCCGGGAGGCAGAGCTTGCA 31370	2082 GTGAAGCGAGATCACACTGCACTCCAGCCTGGGGGAGAGAGGGACACTTCCTCTAA 2141
6 6 6	DP GA	Oy Dp	\$\$ qq	Qy Dp	oy Dp	P Q	P G	8 6	QZ QZ	Sp. Sy.	දු දු	रुठ वृत	Qy Dp	65 G	& A	P G
Db 50106GCATTGGTTACCTTTTATGGTGGCACTGGATGGATGGATGGCTTTA 50058  Qy 1800 CCTCAGGAGTAGAGGTGATCTCTGCTGGAAAGAAAATAGAATGAAATATTCTCCGGGC 1859  Db 50057 TGGTAGTGATGCACATTCTCTCAAAATAAATTAAGTCAGTTTAAAAGTAAAGCAGGC 49998  Qy 1860 CAGGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGCCATGTGGATCA 1919	49997 CGGGCACGGTGGCTCAAATCCCAGCAGTTTGGGAGGCTGAGGCAGGTGGAACA  1920 CCTGAGGTCAGGAGTTCAAAACCAGCTGGCCAACAGTGGTGAAACCCCGTCTTACTAAA  49937 CCTGAGGTCAGGAGTTCAAAACCAGCCTGACCAACATGGAGAAACCCCGTCTTACTAAA  49937 CCTGAGGTCAGGAGTTCAAGACCAGCCTGACCAACATGGAGAAACCCCGTCTTACTAAA	OY 1980 AATACAAAAATTAGCTAAGTGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGG 2039	OY 2040 IGAGGCAGGAGAATTTCTTGAACCCGGGAGGCAGAGGTTGCAGTGAAGCGACACCACC 2099	QY 2100 ACTGCACTCCAGCCAGAGGAGACTTCCTCAAAAAAAAAA	RESULT 14 US-09-820-924-3/C : Seminore 3, Amplication HS/09820024	Fatent No. 6555351 GENERAL INFORMATION: FAPLICANT: BEASLEY, Ellen M. et al TITE. OF INVENTION : 1501 APEN HIMAN BROYME DECERTING MICHEL	TITLE OF INVENTION: ACID MOLECULES ENCODING HOWAN ENZYME PROTEINS, AND USES; TITLE OF INVENTION: THEREOF; FILE REFERENCE: CLOOLING: CHREENEW ADDITIONATION MINISTER IS ACCOUNTY.	, 4,	;	Query Match  Best Local Similarity 56.3%; Pred. No. 2.5e-65; Matches 829; Conservative 0; Mismatches 595; Indele 48; Gaps 12;	TCTTGAAACAGGGTATCACTCTGTTGCCCAGGCTGGAGTACAGTGCGTAA 7	795 TAATAGCTCACTGCAGCCTCC CCTCCTGGGCTCAAGCAATCGCTGGCCTCAGCATCCT	854 GAGTAGCTGGGACTACAGGCTTGTGCACCCAGGCCAGCTAAGTTTTAAAAATGATTTTT 3.51.4 GAGTAGCTACCAACCAACAACAACAAAAAAAAAAAAAAA	914 IGGTATAGAGAGTCTTGCTATGTTGCTCAGGCTGTATTTTTTTT		CATTAGTCAGTTGACAGTTTAGGTTGTTTCCACTTTTGACCATTATGAATAATACT

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US-09-735-934A-3/C
15-09-735-934A-3/C
5 Sequence 3. Application US/09735934A
5 Patent No. 6372468
6 GENERAL INFORMATION:
7 APPLICANT: LI, Jiayin et al
7 TITLE OF INVENTION: ISOLATED HUMAN KINASE PROTEINS, NUCLEIC
7 TITLE OF INVENTION: THEREOF
7 TITLE OF INVENTION: THEREOF
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7 TITLE OF INVENTION: THEREOF
7 TITLE OF INVENTION: THEREOF
8 TITLE REPERENCE: CL000821.
8 CURRENT APPLICATION NUMBER: 105/09/735,934A
8 CURRENT FILING DATE: 2000-12-14
8 NUMBER OF SEQ ID NOS: 4
8 SOFTWARE: PRESEQ for Windows Version 4.0
8 SEQ ID NO 3
8 LENGTH: 43950
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7.7%; Score 303; DB 4; Length 43950;
Best Local Similarity 68.2%; Pred. No. 4.8e-65;
Matches 492; Conservative 0; Mismatches 200; Indels 29; Gaps
                                         31309 AAAAAAAAAAAAAAAAAAAAGGAACCAACTA 31278
2142 AAAAACAAAAACAAAAGAATTAAGCAAATTA 2173
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Sequence 10, April Sequence 24494, A Sequence 24494, A Sequence 1, April Sequence 114, April Sequence 4, April Sequence 52, April Sequence 52, April Sequence 10, April Sequence 7810, April Sequence 7810, April Sequence 7810, April Sequence 7810, April Sequence 7810, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 2278, April Sequence 
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                                                                                                                                                                                                                                                                      May 13, 2004, 09:06:53 ; Search time 2270.77 Seconds (without alignments) 7909.918 Million cell updates/sec
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| Cancel C | Captodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Captodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 1 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Cancel C | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubbna / USO | PUBCOMB . seq: + | Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 2 / Pubcodata 
GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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US-10-087-192-814

US-10-240-425-1569

US-10-087-192-52

US-10-181-1010

US-10-181-1810

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13 US-10-235-192A-34 15 US-10-020-141-7 15 US-10-017-631-1 13 US-10-012-697-19222 16 US-10-012-697-1406 13 US-10-287-192A-31 13 US-10-287-192A-31 15 US-10-087-192-1168 15 US-10-087-192-1168 16 US-10-027-632-115030 16 US-10-027-632-115030 16 US-10-027-632-115030 17 US-10-027-632-115030 18 US-10-027-632-115030 19 US-10-027-632-115030 10 US-10-027-632-115030 10 US-10-027-632-115030 10 US-10-027-632-115030 10 US-10-027-632-115030	6 US-1 6 US-1 6 US-1 3 US-1 3 US-1 3 US-1 8 US-1 6 US-1 6 US-1 6 US-1 7 US-1 8 US-1 8 US-1 8 US-1 8 US-1	10016725 8A1 COA Desaturase Promoter US/10/016,725 -06-10	0%; Sco 0%; Pre 0; M AAATCATA AAATCATA AAATCATA
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Qy         3541         GCTCCCGACGCGGGATGCCGGCACGACGCGGGGGGGGGG	RESULT 2  US-10-097-192-10  is Sequence 10, Application US/10087192  is Publication No. US20020182586A1  is GRANREAL INFORMATION:  is APPLICANT: Morris, David W.  is APPLICANT: Bngelhard, Eric K.  i TITLE OF INVENTION: CANCER  if TITLE OF INVENTION	Query Match         99.3%;         Score 3929.8;         DB 13;         Length 37698;           Best Local Similarity         99.9%;         Pred. No. 0;         2;         Indels 2;         Gaps         2;           Qy         3 GAATTCATCCATTTAAATCATACAATTTAATGGCTTTTAGTATATCACAGGTTGTGCAT         62         GAATTCATCCATTTAAATCATACAATTTAATGGCTTTTAGGTATATTCACAGGTTGTGCAT         63           Qy         63 CCATCACAATCCATTTTAGAACAGTTTTATTACTCCAAAATAAACCCTGCATTCCTTAG         639           Qy         6340 CCATCACAATCCATTTTAGAACAGTTTTATTACTCCAAAATAAACCCTGCATCCTTAG         6399           Qy         123 CCATCACCCCCCCAACATCCTCCCTCCCACAAATAAACACCAC
2401 AGTCTACCTCCCAGGAAATCCCAGGTGCTTGTCTTCCTGGGAAGTGAATCATTGGCGCAG 2460 2401 AGTCTACCTCCCAGGAAATCCCAGGTGCTTGTCTTCCTGGGAAGTGAATCATTGGCCCAG 2460 2461 CACTCCGTATTTTCTCCTTTCCAGGGGAAGGATCCTAGGGCAGTATTGGGAAAGAAC 2520 2461 CACTCCGTATTTTCTCCTTTCCAGGGGAAGGATCCTAGGGCAGTATTTGGGAAAGAC 2520 2461 CACTCCGTATTTTCTCCTTTCCAGGGGAAGGATCCTAGGGCAGTATTTGGGAAAGACA 2520 2521 TGGGCATGGAAGGACCCGGGTGAATGCTAGGCTCTAGGGCAGTTCTGGTAA 2580 2521 TGGGCATGGAAGGACCGGGTGAATGCAGGCACAGGACAGTTCTGAGCTCTAGGTAA 2580 2521 TGGGCATGGAAGGACCGGGTGAATGCAGCCTGCTTCTGGGTACTCTAGGTAA 2580 2521 TGGGCATGGAAGGACCGGGAAAGGATGGCACAGGACAGATCAGGCTCTCATGGTAA 2580 2521 TGGGCATGGAACACGCGAAAAGATGGGCACAGGACAGATCAGGCTCTCATAGGTA 2700 2521 TCAGGGACCGAGACACACGGAAAGGATGGGCACAGGACAGATCAGGCACCTCATATGGT 2700 2641 TCAGGGACCGAGAAAGATATGGTCCTGAGGCACAGTATGGT 2700 2701 GTTTCTGGGCTCCAAATGCTCCTGAGCAGGAATTAAGGCTTGGGCTCTCATATGGT 2700 2701 GTTTCTGGGCTCCAAATGCTCCTGAGCAGGAATTAAGGCTTGGGCTCTCATATGGT 2700 2701 GTTTCTGGGCTCCAAATGCTCCTGAGCAGGAATTAAGGCTTGGGCTCTCATATGGT 2700 2701 GTTTCTGGGCTCCAAATGCTCCTGAGCAGGAATTAAGGGCTTGGGCTCTCATATGGT 2700 2701 GTTTCTGGGCTCCAAATTCCTCCATTTTAAATGGGTTGCTGTGACCATGGGCAAGTTA 2760 2701 GTTTCTGGGCTCCAATTTCCTCCATTTTAAATGGGTTGCTGTGACCATCCCACCTCC 2820 2701 GTTTCTGGGCTCCAATTTCCTCATTTTAAATGGGTTACGGTTACCACTCCCACCTCC 2820 2701 GTTTCTGGGCTCCAATTTCCTCATTTTAAATGGGTTACGGTTACCACTCCCACCTCCCTTTTAAAATGGGTACCCACCTCCCTTTTTAAATGGGGTACCCACCTCCCTTTTTAAATGGGATACGGGTACCCACCTCCCTTTTTAAATGGGATAAATTC 2880 2821 CAGGGCCCAAGAGGGCTTAACAGAAAAACGATTCTTTTTTTT	2881 AATACCTGCCGGCTATTCTTATTCCACATCCAGGCCTTTCGCCTGCTGGTGGAAAA 2940 2881 AATACCTGCCGGCTATTCTTATTCCAAAGCCTTTTCGCCTGCTGCTGGTGAAAA 2940 2881 CACATGTCAGTTATTCCTGACGTTTCCAAAGCCTTTTCGCCTGCTGCTGGTGAAAA 2940 2941 CACATGTCAGTTTTCCTGACGTTTCCAAAGAACTTCCAAAATTACAACCTGCCAG 3000 2941 CACATGTCAGTTTTCCTGACGTTTCCAAAGAACTTCCAAAATTACAACCTGCCAG 3000 3001 TCTGAAGAATCTCCAAAGGTTTCCACAAAGAATCCCAGGGCTTGGGGATGGGAC 3060 3001 TCTGAAGAATCTCCAAAACATCCCGCACGCATCCTGGAGGCGCGGGCTTGGGGATGGGAC 3060 3001 TCTGAAGAATCTCCAAAACATCCCGCACGCATCCTGGAGGCGCGGGCTTGGGGATGGGAC 3060 3001 TCTGAAGAATCTCCAAAACATCCCGCACGCACGCAGCCAGC	3241 TCCCGCGTCCCCAAGCTCCAGATCCTGGGGTGCCTCCTGCCTG

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QY         3482         CTCCCGACGCGGGATGCCGGGCGCGGGGGGGGGGAAGAAGCTGAAAAGGA         3541           DD         9759         CTCCCGACGCGGGATGCCCGGGGGGGGGGGGGGGGGGGAAGAGAAGAGAAGAGAAGA	RESULT 3 US-10-27-632-24494/c US-10-27-632-24494/c   19-10-27-632-24494/c   19-10-27-632-24494/c   19-10-27-632-24494/c   19-10-27-632-24494/c   28-10-27-632-24
10	2883 TACCTGCCAGCTATTCTTATTCCAACCTTTTCGCTGCTGCTGGTGGTGAAAACA 2912  9159 TACCTGCCAGCTATTCTTATTCCACATCCAACCCTTTTCGCTGCTGCTGGTGGAAAACA 2218  2943 CATCTGCAGCTATTCTTATTCCACACTCCAACACTTCCGCTGCTGGTGGTGGTGGTGGTGGTGGTGGTGGTGG

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AAGGTCTCACTATGTTGCCATGATCCCCCCACCTCCACTTCCCAAAGTGCTCATCTTATC
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| GENERAL INCRMATION:
| APPLICANT: Wang, David G. |
| TITLE OF INVENTION: Polymorphisms in the Human Genome FILE OF INVENTION: POLYmorphisms in the Human Genome FILE OF INVENTION: POLYmorphisms in the Human Genome FILE PEPERANCE: 108827.129 |
| CURRENT PRILING DATE: 2002-04-30 |
| PRIOR PAPLICATION NUMBER: US 60/218,006 |
| PRIOR PAPLICATION NUMBER: US 60/198,676 |
| PRIOR FILING DATE: 2000-04-20 |
| PRIOR FILING DATE: 2000-04-20 |
| PRIOR FILING DATE: 2000-04-20 |
| PRIOR FILING DATE: 2000-04-20 |
| PRIOR FILING DATE: 2000-03-29 |
| PRIOR PAPLICATION NUMBER: US 60/185,218 |
| PRIOR PAPLICATION NUMBER: US 60/165,368 |
| PRIOR FILING DATE: 1999-11-23 |
| PRIOR FILING DATE: 1999-11-23 |
| PRIOR FILING DATE: 1999-11-23 |
| PRIOR FILING DATE: 1999-01-26 |
| PRIOR FILING DATE: 1999-03-28 |
| PRIOR FILING DATE: 1999-03-28 |
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| PRIOR PAPLICATION NUMBER: US 60/146,002 |
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Publication No. US20030204075A9
GENERAL INFORMATION:
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APPLICANT: Hayden, Michael R.
APPLICANT: Brownlie, Alison J.
APPLICANT: Ntambl. James M.
APPLICANT: Myazaki, Makoto
APPLICANT: Gray-Keller, Mark P.
APPLICANT: Attie, Alan D.
TITLE OF INVENTION: Wethods and Compositions Using Stearoyl-CoA Desaturase FILE REFERENCE: 760050-7
                                                                                                                                                                       631 AAGGICICACIAIGIIGCCAIGAICCCCCCACCICCACIICCCAAAGIGCICAICIIAIC
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        Score 630.6; DB 16; Length 631;
Pred. No. 1.7e-158;
1; Mismatches 0; Indels 0;
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        15.9%;
99.8%;
Query Match
Best Local Similarity 99.8<sup>3</sup>
Matches 630; Conservative
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NAME/KEY: misc feature
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APPLICANT: Engelhard, Eric K.
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: OCANCER
TITLE OF INVENTION: OCANCER
FILE REFERENCE: 529452000122
CURRENT FILING DATE: 2002-03-01
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2001-03-02
NUMBER OF SEQ ID NOS: 2059
SOFTWARE: FRAESEQ for Windows Version 4.0
SEQ ID NO 814
LENGTH: 59725
                                                                                                                       Score 498.4; DB 10;
Pred. No. 5.7e-123;
0; Mismatches 1;
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Publication No. US20020182586A1
GENERAL INFORMATION:
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99.8%;
PRIOR FILING DATE: 2000-12-15
NUMBER OF SEQ ID NOS: 6
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SEQ ID NO 1
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Best Local Similarity 99.8
Matches 499; Conservative
                                                                TYPE: DNA ORGANISM: Homo sapiens
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                                                                                                                                                                                         Indels 111;
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ABURATANI, HIROYUKI
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1311 AAGATACAAGTTATACTAAGTGAGAAGTGAGAATTAAGGCTGGAATAGGCGCGTTCAGAGT
                                                                 1371 AAAATCATGAAGCACTTTGAATACCAAAATTAAGGAGCTTGGCTGAAACAAAATAA
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Sequence 1569, Application US/10017161
Publication No. US20030143668A1
GENERAL INFORMATION:
APPLICANT: SUMA, MAKIKO
APPLICANT: ASAL, KIYOSHI
APPLICANT: AKIYAMA, YUTAKA

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TITLE OF INVENTION: NOVEL G PROTEIN-COUPLED RECEPTORS FILE REFERENCE: 084335/0152
CURRENT APPLICATION NUMBER: US/10/017,161
CURRENT FILING DATE: 2002-12-18
PRIOR APPLICATION NUMBER: UP 2001/246789
PRIOR FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 2430
SOFTWARE: Patentin Ver. 2.1
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; LOCATION: (9233)..(9332)
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US-10-017-161-1559
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LOCATION: (3602)..(3701)
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                                                                     1806 -GAGACCATTCTGGCCACATGGTGAAACCTGTCTCTACTAAAAATAC-AAAAATTAGC
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                                                                                                           1996 TAAGTGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGGTGAGGCAGGAGTTT
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Pred. No. 8.3e-85;
0; Mismatches 221; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/10087192; Publication No. US20020182586A1; GENERAL INPORMATION:
GENERAL INPORMATION:
APPLICANT: Morris, David W.
TITLE OF INVENTION: CANCER
TITLE OF INVENTION: CANCER
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: NOVEL COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: CANCER
TITLE OF INVENTION: AND CANCER
TITLE OF INVENTION: ACACLER
FILE REFERENCE: 5.9452000122
CURRENT APPLICATION NUMBER: US/10/087,192
CURRENT APPLICATION NUMBER: US 09/747,377
PRIOR FILING DATE: 2000-12-22
PRIOR FILING DATE: 2001-03-02
PRIOR PRIOR FILING DATE: 2001-03-02
PRIOR PRIOR FILING DATE: 2001-03-02
NUMBER: OF SEQ ID NOS: 2059
SOFTWARE: FABLESEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                  ; LOCATION: (1)...(23618)
; OTHER INFORMATION: n = A,T,C or US-10-087-192-4
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Best Local Similarity 69.3%;
Matches 503; Conservative
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693 CTCAAGTGATCCTCCTCCTCAGCCTGCCTAATAGCTAGGAGCACAGGTGTGTGCCACAA
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Fublication No. US20040033502A1
GENERAL INFORMATION:
APPLICANT: Williams, Amanda
APPLICANT: Boland, Joseph F.
APPLICANT: Lord, Reginald V.
APPLICANT: Alvarez, Chris
APPLICANT: Alvarez, Chris
APPLICANT: Wetzel, Jon C.
APPLICANT: Wetzel, Jon C.
APPLICANT: Wetzel, Jon C.
APPLICANT: Wetzel, Jon C.
APPLICANT: Wetzel, Jon C.
APPLICANT: Wetzel, Jon C.
APPLICANT: Wetzel, Jon C.
APPLICANT: Workley, Joseph G.
TITLE OF INVENTION: Gene Expression Profiles in Esophageal Tissue FILE REFERENCE: 44921-5026
CURRENT APPLICATION NUMBER: US/10/240,425
CURRENT FILING DATE: 2002-09-30
PRIOR APPLICATION NUMBER: US 60/193,446
PRIOR APPLICATION NUMBER: US 60/193,446
PRIOR APPLICATION NUMBER: US 60/193,446
PRIOR APPLICATION NUMBER: US 60/193,446
PRIOR APPLICATION NUMBER: US 60/193,446
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PRIOR APPLICATION NUMBER: US 60/193,446
PRIOR FILING DATE: 2000-03-31
NUMBER OF SEQ ID NOS: 1588
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 1584
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US-10-240-425-1584
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Pred. No. 7.5e-83;
0; Mismatches 609;
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ORGANISM: Homo sapiens
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FEATURE:   NAME/KEY: CDS     LOCATION: (5639) (5722)     FEATURE:   NAME/KEY: CDS     LOCATION: (564) (5974)     FATURE:   NAME/KEY: CDS     LOCATION: (7902) (8032)     FATURE:   NAME/KEY: CDS     LOCATION: (9197) (9294)     FATURE:   NAME/KEY: CDS     LOCATION: (9197) (9294)     FATURE:   NAME/KEY: CDS     LOCATION: (9197) (9294)     FATURE:   NAME/KEY: CDS     LOCATION: (9197) (9294)     FATURE:   NAME/KEY: CDS     LOCATION: (10084) (10084)     FATURE:   NAME/KEY: CDS     LOCATION: (10431) (10523)     LOCATION: (10431) (11786)     LOCATION: (11713) (11786)     US-10-181-875-10	Query Match         8.8%;         Score 349.8;         DB 16;         Length 12394;           Best Local Similarity         55.2%;         Pred. No. 3.8e-82;         Adches 1016;         Conservative         0;         Mismatches 742;         Indels 81;         Gaps 14;           Qy         370 TAITATHAGAGACAGGTTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGCACAATCATA         429           Db         3604 TITTTTTGAGATGGAGTCTTACTCTGTCACCCAGGCTGGAGTGCAGGAGTGCACAGATCTTG 3663	Oy 430 GCTCACTGTAACCTCAAACTCCTGGGCTCAAGTGATCTACTACCTCAGCCTCCAGGGTA 489  bb 3664 GCCGGCTACAACCTCTGCCTCCCAGGTTCTTGTGCCTCAACCACCTGAGTA 3723  Oy 490 GCTAGGACTACAGGGACACACGCCATACCTACTTTTTTTT	ON 550 AIGTAITCTITICTITITIGHTGITTIGAGATAGGGTCTCACTTIGTTA 609  Db 3782 GTAGAGACAGGGTTTTGCCATGTTGGTCTTGAACTCCTGACCTCCAGTTAT 3841  Qy 610 CCCAGGCTGGAGGCAGTGGTGACAGCTGACTCCTGACCTCCAGGTCAG 669  Db 3842 CCGCCCCACCTCCAAATGCTGGTATTACAGCTTTACAGCTTCCTGGCTT 3894  Qy 670 TGATCCTCCTCACCTCCCAAATGCTGGTATTACAGCATGAGCCAGCTT 3894  Qy 729 GGCTGATTTTTTTTTTTTTAAACACAGAAACTGGATTAGATGTGAAACTTGTTTTTTTT
1571 TGGGACTACAGGCACTTCCCACCAGGTGATTTTTGTATTTTTAGTACAGGGG 1630   1631 ATTTCACTTTGTGGCAAGCCCCAGGTGATTTTTGTATTTTTAGTACAGACAG	Qy 1960 GARACCCCGTCTRCTAARARTACAAAATTAGCTAAGTGGTGGCGCATGCCTGTA 2019	QY         2080 CAGTGAAGCGAGATCACCACTGCACTCCAGCGGGGAGAGAGCGAGACTTCCTC 2139           Db         6126 CGGTGCGTGAGATTATGCCACTGCACTCCAGCCTGGGAACAGAGATACCATCTC 6185           QY         2140 AAAAAAAAAAAAAAAAAAATTAAGCAATTAAGACAT 2178           Db         6186 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	RESULT 11 US-10-181-875-10 Sequence 10, Application US/10181875 Publication No. US20030216333A1 GENERAL INFORMATION GENERAL INFORMATION APPLICANT: ISLS Pharmaceuticals, Inc. APPLICANT: Brett P. Monia APPLICANT: Brett P. Monia APPLICANT: Madeline Wyatt TITLE OF INVENTION: ANTISENSE MODULATION OF GLYCOGEN SYNTHASE KINASE 3 ALPHA EXPRESSI FILE REFERENCE: RTSP-0356 CURRENT APPLICATION NUMBER: US/10/181,875 CURRENT FILING DATE: 2000-01-21 FILE REFERENCE: SQ 10 NOS: 88 CURRENT FILING DATE: 2000-01-21 NUMBER OF SEQ ID NOS: 88 LENGTH: 12394 FRICH: TYPE: DAN ORGANISM: Home sapiens FEATURE: FEATURE: FEATURE: FEATURE: FEATURE: FEATURE: FEATURE: FEATURE: FEATURE: NAME/KEY: CDS LOCATION: (115)(397) FEATURE: NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS NAME/KEY: CDS

	RESULT 12  US-09-764-891-7810  is generoe 7810, Application US/09764891  is Publication No. US2003007780841  is Publication No. US2003007780841  is Publication No. US2003007780841  is APPLICANT: Rosen et al.  is TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies  FILE REFRENCE: PC006  is CURRENT APPLICATION NUMBER: US/09/764,891  is CURRENT FILING DATE: 2001-01-17  is Prior application data removed - consult PALM or file wrapper:  SOFTWARE: Patentin Ver. 2.0  is SO	1561
964AGACAAGGTCTCACTATGTTGCCATGATCCCCCCACCTCCCACTTCCCAAAGTGCTC 1019 4195 TTTAAGACAGAATCTCGTTCTGTCACTAAGGCTGGAGTGCAGTGGTGTGTGT	TGTIGGGTTTATATCTAGGAGTGGAATTGCTGGATCCGGGTAATATTTTGCCAGCTGA  TGTIGGGTTTATATCTAGGAGTGGAATTGCTGGATCCCGGGTAATATTTTGCAGGGGGA  ATTITTTTGTATTTTTTAGAGAGTGGATTTGCCAGGTGCGCCAGGTGGAGGAGGAGGAGGAGGAGAGTGCTGGAAGAGAGAG	

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                                    1981 ATACAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGGT
                                                                             4153 ATAC-AAAAATAAGCCACGTGTGGCGCGTGCCTATAGTCCCCACTACTTGAGAGGCT
                                                                                                                                        2041 GAGGCAGGAGAATTTCTTGAACCCGGGAGGCAGAGGTTGCAGTGAAGCGAGATCACACA
                                                                                                                                                                                                                                               735 TATTTTTTTTTTTGAAACAGGGTATCACTCTGTTGCCCAGGCTGGAGTACAGTGGCGTAA
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Sequence 2275, Application US/09880107

Partent No. US20020142981A1

GENERAL INFORMATION:

APPLICANT: HORMATION:

APPLICANT: Wockley, Joseph G.

APPLICANT: Gene Logic, Inc.

TILLE OF INVENTION: Gene Expression Profiles in Liver Cancer;

TILLE OF INVENTION: Gene Expression Profiles in Liver Cancer;

TILLE OF INVENTION: Gene Expression Profiles in Liver Cancer;

PILLE REPERENCE: 44921-5028-WG

CURRENT APPLICATION NUMBER: US/09/880,107

CURRENT FILING DATE: 2001-06-14

PRIOR FILING DATE: 2000-06-14

PRIOR FILING DATE: 2000-06-14

PRIOR FILING DATE: 2000-06-14

PRIOR FILING DATE: 2000-06-14

PRIOR FILING DATE: 2000-06-14

PRIOR FILING DATE: 2000-06-14

PRIOR APPLICATION NUMBER: US 60/237,054

PRIOR FILING DATE: 2000-10-02

SOFTWARE: PALENTIN VET. 2.1

SEQ ID NOS: 3950
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8.7%; Score 342.8; DB 9;
Best Local Similarity 57.5%; Pred. No. 4.9e-80;
Matches 848; Conservative 0; Mismatches 552;
                                                                                                                                                                                                                                                                                                                                                   2161 ATTAAGCAAATTAGACA 21.77
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US-09-880-107-2278
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                                                                                   4214 GAGGCAGGAGAATCACTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCCAAGATCACACCA
4155 ATAC-AAAAATTAGCCACGTGTGGTGGCGCATGCCTATAGTCCCCACTACTTGAGAGGCT
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llarity 69.9%; Pred. No. 3e-81;
Conservative 0; Mismatches 211; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PC006
CURRENT APPLICATION NUMBER: US/09/764,891
CURRENT FILING DATE: 2001-01-17
Prior application data removed - consult PALM or file wrapper NUMBER OF SEQ ID NOS: 10231
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 7809
LENGTH: 29163
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7809, Application US/09764891
Publication No. US20030077808A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                2161 ATTAAGCAAATTAGACA 2177
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US-09-764-891-7809
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Best Local Similarity
Matches 515; Conserv
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US-10-235-192A-34

Sequence 34, Application US/10235192A

Publication No. US20040043389A1

GENERAL INFORMATION:

TITLE OF INVENTION: Methods and Compositions for Identifying

TITLE OF INVENTION: Risk Factors for Abnormal Lipid Levels and the Diseases

TITLE OF INVENTION: and Disorders Associated Therewith

FILE REFERENCE: MMI-011

CURRENT APPLICATION NUMBER: US/10/235,192A

CURRENT FILING DATE: 2002-09-04

NUMBER OF SEQ ID NOS: 49

SOFTWARE: FastSEQ for Windows Version 4.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCAGCTCACGCCTCCGCCTCCCGGGTTCAAGCTATTCTCCCTGTCTAGCTCCC
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BC035771 BC035510 BC038630 BC038630 BC035510 BC035510 BC03571 AL560585 BW166025 AF101960 AL778531 AL578531 AL578531 AL578531 AL578531 AL778531 AL778531 AL778531 AL778531 BW171463 AL7701463 AL7701463 BW373992 BW373992 BW373992 BW373992 BW373992 BW3739392 BW3739392	ALGNMENTS	1238 bp  MGC_119 H  hordata; C  rimates; C  i.nih.gov/ f Health, if  sberg, Ph. inth.gov/ ife Techno ife Techno bion: Life bion: Life bion: Life AG.B. Con R.G.B. Con R.G.B. Con R.G.B. Con R.G.B. Con R.G.B. Con R.G.B. Con
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 Socation/Qualifiers
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Best Local Similarity
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Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
cDNA Library Preparation: Miklos I Brownstein (NHGRI), Shiraki
Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://imag-llnl.gov
Plate: LiAMI1746 row: C column: 18
High quality sequence stop: 576.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 579)
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BI559696 579 bp mRNA linear EST 05-SEP-2-
602252566Fl NIH_MGC_97 Homo Bapien8 cDNA clone IMAGE:5294921 5',
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                                                                                                                                                                                                                                                                                                                         NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
Unpublished (1999)
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/organism="Homo sapiens"
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8 8 8 8 8	2 6 8 6 8	\$ 8 \$ 8 \$	Db RESULT RESTOL LOCUS DEINI ACCESS VERSION KRYWOLO	SOURCE ORGA REFERE AUTH TITL JOUR	PEATUR! 8	
	Db	ON HSO	GSS. Homo sapiens Homo sapiens Eukaryota, M Ammalia; Bu I Mahairas, G.G Keller, A., S Hood, L. Sequence-tag scanning the	UDURAND Froc. Natl. Acad. Sci. U.S.A. 96 (17), 9739-9744 (1999)  MEDLINE 10449764  COMMENT CONTACT: Mahairas GG, Wallace JC, Hood L High Throughput Sequencing Center University of Washington 401 Queen Anne Avenue North, Seattle, WA 98109, USA Tel: (206) 616-3618  Eax: (206) 616-3887  Email: jwallace@u.washington.edu Clones may be purchased from Research Genetics (info@resgen.com). BAC end Wab Server: http://www.htsc.washington.edu Plate: 3202 row: C column: 1	TEATURES  Class: BAC ends  High quality sequence stop: 471.  FEATURES  Location/Qualifiers  L	Query Match 11.4%; Score 450.2; DB 28; Length 471; Best Local Similarity 97.0%; Pred. No. 2e-59; Matches 455; Conservative 0; Mismatches 14; Indels 0; Gaps 0;

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BI827092 754 bp mRNA linear EST 04-OCT-2001
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NIH-MGC http://uces.ori.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished (1999)

L Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov

Tissue Procurement: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:

http://image.llh.gov

Plate: LiAM11416 row: n column: 16

High quality sequence stop: 741.
                                                                                                       61 CAATCCATTNTAGAACAGTTATATTACTCCAAAAATAAACCCTGCATTCCTTAGCCATCA 120
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/clone lib="NIH MGC 119"
/clone lib="NIH MGC 119"
/note="Organ: brain; Vector: pCMV-SPORT6; Site 1: Not1;
Site 2: EcoRV (destroyed); RNA source normal medulla from anonymous male age 27 Library is oligo-dT primed and directionally cloned (BcoRV site is destroyed upon cloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for
1 ATCCAINTAAATCATACAATTTAATGGCINTTAGTATATTCACAGGTTGTGCATCCATCA 60
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

    (bases 1 to 754)

                                                                                                                                                                                                                                                                                                         181 TCTATAAATTTGCCAATTCTGGACATTTCATATAAATGGAAGCAAACAACATGTGAGACT
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                                                      69 CAATCCATTTAGAACAGTTTTATTACTCCAAAAATAAACCCTGCATTCCTTAGCCATCA
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/organism="Homo sapiens"
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/db_xref="taxon:9606"
/clone="IMAGE:5167695"
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full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library."
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 1910)
                                                                                                                                                                                                                                                                                                         GGCAGGACGAGGTGGCACCAAATTCCCTTCGGCCAATGACGAGCCGGGAGTTTACAGAAGC
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Homo sapiens RAD1 homolog (S. pombe), mRNA (cDNA clone IMAGE:5582524), with apparent retained intron.
                                                                                                            Length 754;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3913 GCTCTAGCCTTTAAATTCCCGGCTCGGGGACCTCCACGCACCGCGG 3958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                          Score 334; DB 12;
Pred. No. 1.1e-41;
0; Mismatches 0;
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                                                                                                            8.4%;
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Homo sapiens
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                                                                                                                                                Matches 345; Conservative
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BC035771/c
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AUTHORS
TITLE
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KEYWORDS
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VIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapba-rafmail.nih.gov
Tissue Procurement: ATCC
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Prarayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Sequencing center (NISC),
Web site: http://www.nisc.nih.gov
Contact: nisc mgc@nhgri.nih.gov
Contact: nisc mgc@nhgri.nih.gov
Contact: N. Boufsery.R.W. Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Boufsard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Capta,J., Haghighi,P., Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Maskeilloc,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,B.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINN at: http://image.llnl.gov Series: IRAK Plate: 79 Row: d Column: 15 This clone was selected for full length sequencing because it passed the following selection criteria: Similarity but not identity to protein This clone has the following problem: retained intron.
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Submitted (31-JUL-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1474 TITICACCETGGCTGGGCGCAGTGGTGTGATCTCAGCTCACTGCCAACTTTCGCCTCCCGG
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mol_type="mrkn"
db_xref="taxon:9606"
/clone="INAGE:5582524"
/tissue_type="Testis, embra
/clone_lib="NIH_MGC_92"
|lab_host="DH10B"
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CDNA Library Preparation: Not and the factory of the Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing Dy: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web Site: http://www.nisc.nih.gov/
Contact: nisc.mgc@ndgri.nih.gov/
Contact: nisc.mgc@ndgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho.S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,O.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripp,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Malker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clone distribution: MGC clone distribution information can be found
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        through the I.M.A.G.E. Consortium/LINL at: http://image.llnl.gov
Series: IRAL Plate: 39 Row: p Column: 13
This clone was selected for full length sequencing because it
passed the following selection criteria: Similarity but not
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 741 ACAAACGIGAAATAGATGTCTTTTTTTTTTTTTGAGATGGAGTTTTTCACTCTTGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1841 ATGAMAMINITUTCCGGGCCAGGCGTGGTGGCTC-ATGCCTGTAMICCCAGCACTITGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7.3%; Score 290.6; DB 11; Length 2076; 67.2%; Pred. No. 2.8e-35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     identity to protein
This clone has the following problem: retained intron.
Location/Qualifiers
                   M.D., Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo mapiens"
| mol Lype="mknk"|
| mol Lype="mknk"|
| db xref="t-axon:9606" |
| clone="IMAGE:5094058" |
| fisuse type="Lymph, Burkitt lymphoma"|
| clone_Tib="NIH MGC_8" |
| lab_host="DH10B-R" |
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; Mismatches 214;
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                Procurement: Louis M.
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Strausberg 1.0. Feingold, E.A., Grouse, L.H., Derge, J.G.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,
Hopkins, R.F., Zeeberg, B., Buetow, K.H., Scheefer ("F., Bhat, N.K.)
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hosieh, F.,
Staplecon, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,
Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Bosk, S.A., McEwan, P.J.,
Morley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, B., Ketteman, M., Madan, A., Rodrigues, S.,
Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Sanilus, D.E.,
Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.,
Generation and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                             2011
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                                                                                                                                                                                1892 ACTITGGGAGGCCAAGGCATGTGGATCACCTGAGGTCAGGAGTTCAAAACCAGCCTGGCC 1951
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AAAIGIACAAAAITCCAICCIIACIGAGCIGAITIAIAITIGITIIAAAITCITITAA 775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              534 TGAGGCTGGAGTGAACTGTAATCCTACAACTGTACTCCAGCCTGGGCAACAGAGCAAGAT 475
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 2076)
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Submitted (31-JUL-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                             GATTCAACTITTAAAAAATACATTAGGCCAGGCATGATAGCTCACGCCTGTAATCCCAGC
                                                                                                                                                                                                                                                                                                                                                             654 AACATAGTAAAACCCCATCTCTACAAAAATACAAAATTAGCAGGGCATGGAGGCATG
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2076 bp mRNA linear HTC 19-1
Homo sapiens sialophorin (gpL115, leukosialin, CD43), mRNA
CLONE IMAGE:5094058), with apparent retained intron.
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Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
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                                                                                                                                                         1372
                                                                                                                                                                                         Shiraki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

    (bases 1 to 2772)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (15-OCT-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                   GAAACCCCCGTCTCTACTAAAAATACAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTA
1198 AGGCCGAGGCAGGTGGATCACCTGAGGTCCAGGAGTTCAAGACCAGCCTGACCAACATGGT
                                                                                      1258 GAAACCCTGTTTC----AAAATACAAAAATTAGCTGGGCGTGGTGGCGGCGCTGTG
                                                                                                                      2020 ATCCCAGCTACTTGGGAGGGTGAGGCAGGAGAATTTCTTGAACCCGGGAGGCAGACGTTG
                                                                                                                                                     1313 Arcccadcractriggadgcrigaggdaggadarcccrrgaacccaggaggrig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Michael Valkovits, M.D., Ph.D.
Contact: Machael Michael J. Brownstein (NHGRI) & Sh
Toshiyuki and Piero Garninci (RIKEN)
CONA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
contact: amadan@systemsbiology.org
contact: amadan@systemsbiology.org
Anup Madan, Jessica Fahey, Brin Helton, Mark Ketteman, Anurad
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7.3%; Score 290.6; DB 11; Length 69.5%; Pred. No. 2.3e-35; tive 0; Mismatches 189; Indele.
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/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5263792"
/clone="ib="wilh MGC_95"
/clone="ib="wilh MGC_95"
/lab_bst="bH108"
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BC038630.1 GI:24116283
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Homo sapiens
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1441 TTTTTTTTTTTTTTTTGAGAAAGAGTCTTGCTCTT-TCACCCTGGCTGGGCAGTGGT 1499

Conservative

Similarity

Best Local Sim Matches 508;

DB 11; Length 2772;

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Wataryota, Metazota, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 2772)
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Direct Submission
Submitted (15-07-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
TTTTTTTTTTTGGTAAGACGGAGTTTTGCTCTCCCAGGCTGGAGTGCAATGGT
                                                                                                                          GCCATCTCGGCTGGCTGCAAACTGCACCTCCCGGGTTCAACAGATTCTCCCTGCCTCAGCC
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                                                                                     GTGATCTCAGCTCACTGCAACTTTCGCCTCCCGGGTTCAAGCAATTCTCCTGCTTCAGCC
                                                                                                                                                                                                         TCCCAAGTAGCTGGGACTACAGGCACTTCCCACCATGCCCAGCTGATTTTTGTATTTTTA
                                                                                                                                                                                                                                                       2633 TCCCAAGTAGCCGGGACCACAGGTGGCCGCCACCACCAGCCAATTTCTGTATATTTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                        1680 GITGIAACIAITGITCCITTTGCTGAGGIAGGCCCCCCAGACCAAAAAAAATAAATCTTA
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Contact: MGC help desk
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                                                      Shiraki
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                          contact: amadan@eystemsbiology.org
Anup Madan, Jessica Fahey, Erin Helton, Mark Ketteman, Anurac
Madan, Stephanie Rodrigues, Amy Sanchez and Michelle Whiting
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Miklos Palkovits, M.D., Ph.D.
COMA Library Preparation: Michael J. Brownstein (NHGRI) &
Toshiyuki and Piero Carninci (RIKEN)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LIML)
DNA Sequencing by: Institute for Systems Biology
http://www.systemsbiology.org
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                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
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/clone="IMAGE:2563792"
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/clone_lib="NIH MGC_95"
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/note="Vector: pBluescript"
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Email: cgapbs-remail.nih.gov
Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
CDNA Library Preparation: Rubin Laboratory
CDNA Library Preparation: Rubin Laboratory
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing Py: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Contact: nisc. mgc@nhgri.nih.gov/
Contact: nisc. mgc@nhgri.nih.gov
Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B.,
Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S.,
Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P.,
Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R.,
Maduro, Q.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C.,
McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W.,
TSurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L.,
Young, A., Zhang, L.-H. and Green, B.D.
2638 GAGGCAGGAGAATCTGTTGAACCCGGGAGGTGCAGTTTGCAGCGAGGCCGAGATGGCACCA 2697
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Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
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2076 bp mRNA linear HTC 19-NOV-20 HOmo sapiens sialophorin (gpL115, leukosialin, CD43), mRNA (cDNA CLORE IMAGE:5094058), with apparent retained intron.
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Submitted (31-JUL-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
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Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                              2698 Trischereckástergasakakakasastakakatástakatakakakakakaka
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sednences
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Strausberg, R.
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BU175345
AGENCOURT_7936105 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6011997
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1 (bases 1 to 749)
NIH-MGC http://mgc.noi.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-romail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----CTAAAGCGATCTGTCTGCCTCGCCTCCCAAAGTGTTGGGATAAGTGCTGGGAT 332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="INAGE:6011997"
/tissue_type="embryonal carcinoma, cell line"
/tab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC 92"
/note="Organ: testis; Vector: pCNV-SPORT6; Site_1: NotI; Site_2: Sall; Cloned unidirectionally; oligo-df primed.
Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52 İTİTİTİTİTİTİTİTİSAAACAGTĞTÇİCACİCİGİCĞĞCLĞĞĞÜTĞAĞTTCAĞTĞĞTĞCC
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CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM13202 row: i column: 22
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Best Local Similarity 64.5%; Pred. No. 7.4e-32;
Matches 462; Conservative 0; Mismatches 230;
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/organism="Homo sapiens"
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Location/Qualifiers
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/db_xref="taxon:9606"
                                                                                                                                                                        5', mRNA sequence.
BU175345
BU175345.1 GI:22689329
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753 ATT
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BU175345
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  Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LIML at: http://image.llnl.gov Series: IRAL Plate: 39 Row: p Column: 13 This clone was selected for full length sequencing because it passed the following selection criteria: Similarity but not identity to protein This clone has the following problem: retained intron. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1502
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                                                                                                                                                                                                                                                                                                                                                                                                                              DB 11; Length 2076;
                                                                                                                                                                                                                                                                                                                                                                                                                     6.9%; Score 273.4; DB 11; Length 67.4%; Pred. No. 1.2e-32; tive 0; Mismatches 206; Indels
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/organism="Homo sapiens"
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Matches 487;
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Score 269.4; DB 12;
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    6.8%;
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                   Best Local Similarity 97.8
Matches 273; Conservative
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Homo sapiens
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5', mRNA sequence.
                                       1803 CAGGAGTAGAGGTGATCTCTGCTCGAAAGAGAAATAGAATGAAATATTCTCCGGGCCAG 1862
                                                                                                                       1863 GCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCATGTGGATCACCT 1922
                                                                                                                                                                                                          1923 GAGGTCAGGAGTTCAAAACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAT 1982
                                                                                                                                                                                                                                                                                          1983 ACAAAAATTAGCTAAGTGTGGTGGCGCATGCCTGTAATCCCAGCTACTTGGGAGGGTGA 2042
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//clone lib="NIH MGC 124"
//note="Organ: brain; Vector: pCWV-SPORT6; Site I: ECORV
//note="Organ: brain; Vector: pCWV-SPORT6; Site I: ECORV
//clone close is site 2: Not!; NAM source male hippocampus,
age 27. Library is oligo-dr primed and directionally
cloned (ECORV site is destroyed upon cloning). Average
insert size 1.4 kb, insert size range 0.9-4 kb. Library is
normalized and enriched for full-length clones and was
constructed by C. Gruber (Invitrogen). Research Genetics
tracking code 012."
                                                                              390 ATTIGCÍGITARGIÁTIACACATATIÁTGÁAAGCATATIAGÁÁIGIÁTTITÓTGGGCÓGG 449
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333 IGCAGAIGTGAGCCTCTGCACCCAGCCTATCCCTTTTTA----AGAIGGGAAAAATGGAA 389
                                                                                                                                                                                                                                                                                                                                                                                                                628 GTTGGGAGGATTGCTTGAGTCCAGGAGTTTGAGGGTATAATGAACTATGGGTGCACAACT 687
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

    (bases 1 to 1172)

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Tissue Procurement: Invitrogen
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LINL at:
http://image.lln.gov
Plate: LLAM12726 row: i column: 18
High quality sequence stop: 618.
Location/Qualifiers
1. 1172
                                                                                                                                                                                                                                             510 GAGCCCAGGAGATCAAGACCAGCCTGGGCAACATAGCAAAACCTTGTCTC--CAAAAAT
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
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Homo sapiens
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Straubberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Riausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Altschul, S.F., Zoeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,
Hopkins, R.F., Jordan, H., Morce, T., Max, S.I., Wang, J., Haich, F.,
Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,
Scheefer, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,
Garninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,
Abramson, R.D., Mullahy, S.J., Boask, S.A., McZwan, P.J.,
McKernan, K.J., Mallek, J.A., Qunaratne, P.H., Richards, S.,
Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,
Villalon, B.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,
Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodriques, S.,
Bauchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences.
M. Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1910)
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Submitted (31-701-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186 GGCAGCGATAAAAGGGGGGCTGAGGAAATACCGGACACGGTCACCCGTTGCCAGCTCTAG
                                                                                                                                                                                                                                                                                                  3740 GCATCCCCGGCCCTGCTGCGGGTCGCCGCGAGCCTCGGCCTCTGTCTCCTCCCCCCTCCC
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                                                                                                                                                                                                                                                                                                                                                                               126 GCCCTTACCTCCACGCGGGACCGCCCGCCAGTCAACTCCTCGCACTTTGCCCCTGCTT
                                                                                                                                             3680 GCATTTCCCCAGAGGCGAGGGCCAGGGCCGGGTGGTGTGGTGTCGCTGTCGGCA
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Length 1172;
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HOMO Sapiens RAD1 homolog (S. pombe), mRNA (cDNA clone IMAGE:5582524), with apparent retained intron.
BC035771
                                                                    Indels
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Tissue Procurement: ATCC
CDNA Library Preparation: Life Technologies, Inc.
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ALS80585 Homo sapiens T CELLS (JURKAT CELL LINE) COT 10-JUN-2003
Homo sapiens cDNA clone CS0DJ015YK20 3-PRIME, mRNA sequence.
ALS80585.2 GI:31318853
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Li (bases 1 to 229)
Li, W.B., Gruber, C., Jessee, J. and Polayes, D.
Pull-Length cDNA libraries and normalization
Unpublished (2001)
On Feb 16, 2001 this sequence version replaced gi:12946748.
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/clone_lib="Homo sapiens T CELLS (JURKAT CELL LINE) COT
10-NORMALIZED"
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Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
BP 191 91006 EVRY cedex - France
BRail: sequefégenoscope.cns.fr, whe : www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. This sequence belongs to sequence cluster 8901.f For
Invitrogen. This sequence belongs to sequence cluster 8901.f For
thtp://www.genoscope.cns.fr/
cgi-bin/cluster.cgi?seq-CS0DJ015BF10NP1&cluster=8901.f. Contact :
from Library Enail : fliang@llfetech.com URL :
http://fulllength.invitrogen.com/ InvitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID : CS0DJ015BF10NP1,
                                         1979 AAATACAAAAATTAGCTAAGTGTGGCGCATGCCTGTAATCCCCAGCTACTTGGGAGG
                                                                                                                                                2039 GTGAGGCAGGAGAATTTCTTGAACCCGGGAGGCAGAGGTTGCAGTGAAGCGAGATCACAC
                                                                                           973 AAAATACAAAAATTAGCTGGGTGTGGTGGTGTGTCTGTAATCCCAGCTACTTGAGAGG
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62.2%; Pred. No. 2.8e-30;
live 14; Mismatches 245; Indels
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                                                                     Galthersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Contact: nisc_mgoenhgri.nih.gov
Contact: nisc_mgoenhgri.nih.gov
Athter.N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G., Breen,K., Brinkley,C., Brooks,S.,
Districh,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,B., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
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through the I.M.A.G.E. Consortium/ILML at: http://image.llnl.gov
Series: IRAK Plate: 79 Row: d Column: 15
This clone was selected for full length sequencing because it
passed the following selection criteria: Similarity but not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         511 GGÁTTACAGTÍCÁCTCCAGCCTCAATCTCCTAGGCTCAAGCAATCCTCCCATCTCAGCTT
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cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 269.4; DB 11; Length 1910;
Pred. No. 5.3e-32;
0; Mismatches 236; Indels 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identity to protein.
This clone has the following problem: retained intron.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       embryonal carcinoma"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="tyAGE:558254"
/tissue_type="Testis, emb./clone_lib="WIH MGC_92"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism≃"Homo sapiens"
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DNA Sequencing by: Dr. M. Bento Soares, University of Iowa Clone Distribution: Clone distribution information can be obtained from Dr. M. Bento Soares, bento-soares@ulowa.edu
The following repetitive elements were found in this cDNA sequence: 9-305, >ALU (matched compliment) 326-387, >LIMB7#LINE/LI (matched compliment) 326-387, >LIMB7#LINE/LI Seq primer: MI3 FORWARD
POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1738 TAGAATCCAAATCAGTGTGGTTGGTTTGACCACTGTCACTTGAGAACCACAGTGTGACCAG 1797
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/mol_type="mkNA"
/db_xref="taxon:9606"
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Tissue Procurement: Dr. Jose Mercuende
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
              176 TGATYTCAGCTCGCTGCAACCTCTGCCTCCCGTGTTCAAGCAATTYTCCTGCCTCAGCCT 235
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
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	RESULT 15 AF101960 LOCUS LOCUS DEFINITION AF101960 Human Homo sapiens genomic clone pTWB59.14, genomic survey sequence. ACCESSION AF101960.1 G1:4193786 KEYWORDS SOURCE ONGANISM Homo sapiens (human) REFERENCE ORGANISM BUKATYOTA: Metazoa; Chordata; Catarrhini; Hominidae; Homo. ATHORS BEPLEY, G., O'Briant, K.C., Kim, Y.C., Schreiber, G. and Pitterle, D.M. TITLE ATHORS Bepler, G., O'Briant, K.C., Kim, Y.C., Schreiber, G. and Pitterle, D.M. TITLE AL14-Mb high-resolution physical map and contig of chromosome segment lip15.5 and genes in the LOHIA metastasis suppressor	JOURNAL Genomics 55 (2), 164-175 (1999)  MEDLINE 99134294  PUBMED 9933563  COMMENT Contact: Bepler G  Medicine and Radiology  Dike University Medical Center  Medicine and Radiology  Dike University Medical Center  Row 117, Durham, NC 27710, USA  part of a 1.4 megabase contig including the LOHLIA metastasis  suppressor region Bin T  Class: unknown.  FEATURES  1. 2971  And 1. 2971  Mol type="genomic DNA"  Abol xref="teaxon:9606"  Mol type="genomic DNA"  Abol xref="teaxon:9606"  Map="11pl5.5"  Colone="pTWB59.14"  Aclone="pTWB59.14"	Query Match         6.5%;         Score 255.8;         DB 28;         Length 2971;           Best Local Similarity         65.4%;         Pred. No. 5e-30;         Matches 478;         4;           Matches 478;         Conservative 0;         Mismatches 177;         Indels 76;         Gaps 4;           QY         1442         TTTTTTTTTTTTTTTGCTTGCTTTGCTCTTTGCCTGGGGGG